

Low Inventories  
Seen Continuing  
Sellers' MarketNearly 500 at Meeting of  
NARDA Hear Nance, Bles  
Make Predictions for 1950

By John O. Sweet

CHICAGO—The tight supply situation in the appliance industry will continue for another few months, it was predicted in talks made last week at the annual meeting of the National Appliance & Radio Dealers Association by James J. Nance, president of Hotpoint, Inc., and W. A. Bles, vice president and general sales manager, Crosley Div., Avco Mfg. Corp.

Along with several other speakers, they addressed the best-attended and most successful meeting yet held by the association. Attendance reportedly approached 500, with dealers from 38 states and Canada being registered.

Nance predicted that general business activity will remain high throughout the year and that the appliance industry has a seller's market ahead of it again for possibly as long as six months. Noting that the steel strike cost the industry from four to six weeks of production, he declared:

"With inventories in the distribution system cleaned out, and with the prospect that the steel situation will be touch-and-go until the end of March, I don't see how the industry, even going full blast, will be able to build up inventories to a comfortable level until late spring at least. Even then there may not be much of a chance for a significant letdown."

"An important new element in the appliance business has been the vigor of sales during the summer months, compared with the sharp slump that

(Concluded on Back Page, Column 1)

Distributors View  
Ajax Line for '50

CHICAGO—Introduction of its new and complete line of air conditioning and refrigeration products by the Ajax Corp. of America, was made by the executive and sales staffs before its distributor organization at a convention meeting in the Morrison hotel here recently.

The air conditioning line contains the Roommaster series, made up of both window and console type air conditioners. A feature of the series is the thermostatic damper control which provides automatic temperature control and automatic ventilation.

Augmenting the air conditioning line for home and office, is a complete line of self-contained and central-station units from 3 to 40-ton capacity.

In the refrigeration field, the spearhead of the line is the Ajax Electric Iceman, which produces pure, crystal clear, firm-frozen ice cubes. In the same line are the Ajax Ice Crusher, Dehumidifier, and Water Conditioner.

A three-way-soft-drink dispenser unit also has been added recently to fill out the line and was introduced at the convention.

## IN THIS ISSUE

Food Merchandising Clinic Benefits Commercial Distributor, Customers (Page 6)

Selling 'Up' Pays Off for Dealer Using TV Sets To Sell Refrigerators (Page 11)

LaSalvia Tells How To Get, Control Humidity In High-Low Temp. Box (Page 15)

M. A. Lesser Tells of Glycerine's Many Uses In Air Conditioning (Page 23)

Editorial ..... 14  
What's New ..... 18 & 19  
World Trade News ..... 22  
Patents ..... 26  
P. B. Reed ..... 27

## INSIDE DOPE

by GEORGE F. TAUBENECK

Stories of the Week  
Gas of the Week  
Quotes of the Week  
It Pays to Repeat  
Television and the Housewife  
Percentages in Selling  
Air Conditioning Can Save Us  
Ode (Owed) to Salesmen  
Deserves Attention

## Stories of the Week

According to Dale Mericle, this is a true story:

One of the largest public utilities in the middle west has to contend with a Union of its clerical help. No executive is permitted "to get away with" doing anything (when he's in a hurry and wants to get the job done quickly and correctly) if a member of that Union conceivably could substitute. Even the Union members in that Public Utility must stay within their own job classifications.

So . . . it wasn't surprising that, when one executive borrowed an employee from another department for a temporary job on an adding machine, the department head warned the executive:

"It's all right to let him add or subtract, but don't let him multiply. That'll put him in a higher classification!"

On one side of a roadway in the state of Washington is a national park; on the other is a national forest. The U. S. Department of the Interior controls all national parks. National forests are administered by the Department of Agriculture.

There's an example of the fatuous dangers of bureaucracy to be found there, because:

Should a Washingtonian hunter bag a mountain lion in the national park—and be caught in the act—he'll be fined and/or imprisoned. All he has to do to win a \$15 bounty payment, however, is walk across that roadway and shoot a mountain lion on the Department of Agriculture side.

Smedley, a true "gentlemen's gentlemen" in the Arthur Treacher-Eric Blore tradition, was employed by Worthy T. Worthingham.

Smedley journeyed to Manhattan one day, and engaged in conversation with a fellow commuter.

"By the way," asked his new acquaintance, "you work for Worthingham, don't you?"

"I do not!" corrected Smedley with dignity. "He works for me, you might say. Why, every morning he treks all the way into the city where he works in a stuffy office all day just to support me in the manner to which I have become accustomed."

Terrible-tempered Mr. Bangs decided to reform. He'd be polite and urbane and sweet to everyone even if it killed him, he swore. (And it darned near did, because the effort raised his blood pressure alarmingly).

Funny thing, though. This new attitude didn't make him more popular. Fact was he found that relatives, friends, and acquaintances seemed to be avoiding him.

In desperation he made a clean breast of his project—and its sorry results—to his brother-in-law.

"Oh, so that's how it is," owned up the brother-in-law, relievedly. "We all figured you wanted to borrow some money."

Miss Witecollar had been a conscientious and efficient secretary for a number of years. When her boss died suddenly the amanuensis carried on bravely the next morning.

There was an unmailed letter, which had been signed by the deceased on her desk. It was her duty, she felt, to mail it. Before placing the letter in an envelope, however, thoughtfully she added the following note:

"Shortly after writing the above letter, I passed away."

"Letter to Pinchbottom and Buglebottom, Inc.," dictated the Brass Hat to his almost-new secretary. "Gentlemen."

(Concluded on Page 12, Column 1)

## AIR CONDITIONING &amp; REFRIGERATION News

Vol. 59, No. 4

January 23, 1950

Serial No. 1088

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879.  
Trade Mark Registered U. S. Patent Office. Copyright, 1950, by Business News Publishing Co.

Deepfreeze Lists  
New Lineup of  
Key Executives

NORTH CHICAGO, Ill.—New executive lineup at Deepfreeze Appliance Div. of Motor Products Corp., as it henceforth will be known, is as follows:

As reported some time ago in the News, L. J. Sorensen is now vice president and general manager of Deepfreeze. He was formerly treasurer and controller of the parent company.

G. H. "Rock" Smith, who resigned as general manager shortly after the first of the year, has entered business for himself as a merchandising consultant. R. V. Newbell, formerly manager of home freezer sales, has joined Levally, Inc., advertising agency, which handles the Deepfreeze account.

Ben G. Sanderson, general sales manager, succeeds G. F. Weisenbach who recently resigned. Sanderson was

(Concluded on Page 4, Column 4)

Household Sales of  
13 Firms Drop 13%

(See table page 25)

NEW YORK CITY—World sales of refrigerators for November as reported by 13 companies of the National Electrical Manufacturers Association were 41% less than those reported for the same month of 1948, according to a recent report from the association.

Sales totaling 230,258 units were made during November. This represents a 13% decline from October, 1949 when the total reached 265,575.

A general downward trend was noted in the report for the first 11 months of 1949. Sales totaled 3,579,784 units, as compared with 3,827,706 units sold during the same period of 1948, or a decrease of 7%. Only three categories showed a rise in number of units sold. These were in 6-cu. ft., 11 and 12-cu. ft., and the 13-cu. ft. and larger sizes.

Foreign sales by these companies reflected the same trend; 134,673 units were sold during the first 11 months of 1949, compared with 182,275 units sold in the same period of 1948.

Wm. Helt Will Manage  
Coolerator Range Sales

DULUTH, Minn.—Three new appointments in the sales organization of the Coolerator Co. here have been announced by W. C. Conley, Jr., company sales manager.

William J. Helt, former president of Appliance Distributors, Inc., Coolerator wholesaler in Indianapolis, has been appointed national range sales manager.

New district manager for the eastern seaboard territory is Fred C. Margolf. He comes to Coolerator after serving as general manager for a Washington, D. C. distributorship and replaces George D. Morton, who has resigned to become a Coolerator distributor in Knoxville, Tenn.

William A. Costello, former sales promotion manager, has gone into the field as district representative for the east central territory.



William J. Helt

Convention of  
Frozen Food  
Industry Set

CHICAGO—Convention spotlights will be focused on two important segments of the refrigeration industry during the first week in February when both frozen food packers and distributors and refrigerated warehousemen hold their annual conventions here.

The National Frozen Food Industry convention, sponsored by the National Association of Frozen Food Packers will be held at the Congress hotel Jan. 31 through Feb. 3.

And up at the Edgewater Beach hotel the fifty-ninth annual meeting of the American Warehousemen's Association will run from Jan. 30 to Feb. 1. On Thursday, Feb. 2, most of the delegates to the National Association of Refrigerated Warehouses (an AWA division) are expected to move down to the Congress for the general sessions of the frozen food convention.

Formal speeches will be kept to a minimum at the NARW meeting, it is promised, but all-day open sessions

(Concluded on Page 25, Column 1)

Mart Attendance  
Hits All-Time High

CHICAGO—Records for attendance and volume were being broken right and left during the second week of the American Furniture Mart.

At the beginning of the second week attendance had reached 21,000. The record was set in 1948 with 24,916 buyers from 12,667 stores. Volume was equalling and surpassing the record-breaking year and running nearly 4,000 ahead of Winter 1949.

Conditions in the market caused buyers to buy more than they had intended, a *Chicago Market Daily* survey revealed.

(Concluded on Page 4, Column 5)

Goodwin, Pollock Move  
To New Posts at Temprite

(See photos on back page)

DETROIT—Appointment of James J. Goodwin as general sales and advertising manager, and William Pollock as national service manager of Temprite Products Corp. here has been announced by Lud Emde, vice president and general manager.

Goodwin has been with Temprite for 15 years serving in engineering and sales and recently has been in charge of the company's eastern sales division and national advertising.

Pollock, formerly head of laboratory engineering, has had extensive experience in production and service during his 20 years with Temprite.

Gas Range Price Rise May  
Come Within 2 Months

NEW YORK CITY—A strong possibility that gas range prices would climb within the next 60 days was reported here by the *New York Times* last week.

Increases in the costs of steel and components were cited by one large manufacturer who indicated his company might move for a boost on or before Jan. 25.

Although the amount of the prospective upswing in gas range prices was not definite, many producers in the field mentioned the figure of 10%.

Servel Introduces  
6 Refrigerators  
In Household Line

CHICAGO—Forecasting a 50% sales increase in 1950 W. Paul Jones, president of Servel, recently introduced a redesigned Servel gas refrigerator to 500 distributors, gas utility executives, and Servel sales managers in a meeting at the Edgewater Beach hotel here.

"There will be no compromise with quality in the new line and we will attain expanded sales through retail price reductions, expanded dealer organizations and increased advertising effort," Jones said.

In explaining the new line Jones said, "Servel retained Walter Dorwin Teague, one of the country's leading industrial designers, to achieve an exterior appearance which will match the long lasting qualities of the

(Concluded on Page 4, Column 4)

L. T. Avery Elected  
President of ASHVE

DALLAS, Tex.—Election of Lester T. Avery, president of the Avery Engineering Co. of Cleveland, as the 1950 president of the American Society of Heating and Ventilating Engineers was announced at the society's 56th annual meeting in the Hotel Adolphus here.

Other officers elected were: First vice president, Lauren E. Seeley, dean of the College of Technology, University of New Hampshire, Durham, N. H.; second vice president, Ernest Szekely, president, Bayley Blower Co., Milwaukee; treasurer, Reg F. Taylor, consulting engineer, Houston, Tex.

Avery succeeds Alfred E. Stacey, Jr., director of application engineering for the Carrier Corp., Syracuse, N. Y.

The society also announced new members of the Council and the Committee on Research.

Elected to three-year terms on the Council were: John E. Haines, vice president, Minneapolis-Honeywell Regulator Co., Minneapolis; John W. James, chief research engineer, McDonnell and Miller, Inc., Chicago; E. R. Queer, professor of engineering research, Engineering Experiment Station, Pennsylvania State college, State College, Pa.; Graeme B. Supple,

(Concluded on Page 4, Column 1)

Bureau Warns Vets on  
Dividend Check 'Gyps'

NEW YORK CITY—Sixteen million war veterans were warned by the Better Business Bureaus to be on guard against the army of gyps which will attempt to relieve them of their G.I. insurance dividend money. The warning coincides with the mailing of the first of \$2,800,000,000 in checks by the Veterans Administration.

The warning, in an open letter to veterans and their families, is being distributed by Better Business Bureaus in 90 cities throughout the United States and Canada.

The message says, "Unfortunately, there are people who offer bargains at unusual savings, or promise exceptional returns from a small investment. Although the propositions sound wonderful, many of them may be valueless."

The message alerts veterans to the fact that they will be bombarded by all kinds of sales appeals and that, although they may feel secure in

(Concluded on Page 25, Column 3)



## Move To Return Credit Controls Seen Unlikely

WASHINGTON, D. C.—President Truman, in his recently delivered economic message, asked Congress to give the Federal Reserve Board power to control consumer credit.

Reported remarks from Congressmen following the speech indicate that the Federal Reserve Board is not likely to be voted such power.

In the same message, the President indicated that business should increase production, employment, and incomes.

He felt that price increases at this time would be justified in only a few, if any, areas. He added that in some areas, price cuts are feasible and needed to maintain and expand sales.

## Industrialaire Chartered In N. C.

CHARLOTTE, N. C.—Industrialaire Co., here, has obtained a charter from the secretary of state to carry on the business of humidifying, cooling, ventilating, and heating.

## 2 Nebraska Food Store Chains To Stress Self-Serve Meats In Remodeling Programs

OMAHA, Neb.—A marked swing to supermarket air conditioning and pre-packaged meats vended from reach-in refrigerated cases is in evidence for Nebraska in 1950, with reports coming from two of the largest food store chains serving the state that they will step up the trend to self-service in food selling by installing self-serve meat sections. They are Safeway Stores and Hinky-Dinky Supermarkets, the latter having headquarters here.

L. C. Hawley, zone realty manager for Safeway, said the chain is planning a store replacement program which embraces mechanical year-round air conditioning in a number of Nebraska localities, and more emphasis on pre-packaged meats with butchers spending more of their time behind scenes, packaging their output for display in refrigerated self-service fixtures.

Safeway stores in Omaha, Holdrege, McCook, and Grand Island are included in the air conditioning and pre-packaged meat department plans, while at Lincoln the chain is remodeling a supermarket at 48th and Huntington Ave. where the store was badly damaged by fire last year. The rebuilt store will feature air conditioning and more self-service vending of meats.

Safeway is planning wider and deeper air conditioned stores, Hawley added. The boom in frozen foods will become apparent in more space for reach-in boxes, frozen food cabinets, and meat storage space. Last year the chain installed frozen food cases in dozens of its Nebraska stores.

The remodeling program for Safeway stores also will include greatly enlarged off-street parking facilities. The larger Safeway supermarkets will have parking for 88 cars as

compared with room for 22 to 24 at present, according to immediate plans.

Ben D. Silver, secretary-treasurer of Hinky-Dinky, said plans for his organization are along the same lines as Safeway. Two of the largest supermarkets in the state are to be constructed in 1950 at 25th and "O" Sts. in Lincoln and 50th and Underwood Ave. in Omaha.

These will be air conditioned as well as equipped with hundreds of feet of cases for vending packaged meats, dairy produce, and frozen foods. Parking for 128 cars is planned for the new Lincoln Hinky-Dinky supermarket, Silver stated.

## 2 N. Y. State Stores Merge

ADAMS, N. Y.—The Stanley Appliance Store and the Toleman and Peck hardware store here have been merged and the new firm will operate under the name of Toleman and Stanley. Albert Toleman and Alton Stanley will be managers.

The firm will be located at the corner of Liberty and Main Sts. here.

## Off-Season Selling

## N. Y. Dealers Stimulate Business with Gift of Silver for Trade-In

NEW YORK CITY—The recent trade-in promotion which offered an 80-piece silver service for a customer's old refrigerator if he purchased a new 8.7-cu. ft. International Harvester deluxe model was "very successful," according to W. H. Brodie, sales manager of the I-H Div. of Bruno-New York, Inc.

Bruno-New York promoted the offer through its dealers. Purpose of the promotion, which was backed by a strong dealer advertising campaign, was to introduce the new refrigerator to the metropolitan area.

"We were very enthusiastic about the response and the results of this campaign during the off-season selling period for refrigerators," Brodie said.

"We can definitely state that the promotion was timed perfectly and that the successful results can be attributed to a well-planned merchandising program plus powerful, consistent advertising and follow-up."

Asked how the trade-in refrigerators were disposed of, he explained.

"For the most part, the trade-ins were reconditioned for resale to domestic and foreign markets. Those dealers who had facilities to do reconditioning handled it themselves. However, the dealers who did not have these facilities sold them to 'used' refrigerator brokers and dealers."

The silver service involved in the offer is made by National Silver Co. and has a value of \$118.50. The deal was made possible through a special purchase from National Silver, the expense of which was shared by the distributor and participating dealers.

## Space Going Fast for Oil Heat Exposition Opening April 24 In Philadelphia

NEW YORK CITY—Over 80% of exhibit space for the National Oil Heat Exposition to be held in Philadelphia, April 24 through 28, has been taken, Oil-Heat Institute of America announced recently. Commercial Museum will house the show.

Among the exhibitors already taking space are American Radiator & Standard Sanitary Co.; Delco Appliance Div.; General Motors Corp.; Detroit Lubricator Co.; Fairbanks, Morse & Co.; Fitzgibbons Boiler Co.

General Electric Co., air conditioning department and apparatus department; Gulf Oil Corp.; The Heil Co.; Iron Fireman Mfg. Co.; S. T. Johnson Co.; May Oil Burner Div., Gerotor May Corp.

The Mercoid Corp.; Minneapolis-Honeywell Regulator Co.; Preferred Utilities Mfg. Corp.; Quaker Mfg. Co.; Shell Oil Co.; Silent Glow Oil Burner Corp.; Timken Silent Automatic division, The Timken-Detroit Axle Co.

Toridheet Div., Cleveland Steel Products Corp.; Webster Electric Co.; Williams Oil-O-Matic Div., Eureka Williams Corp.; York-Shipley, Inc.



**MODEL 6710**

Fruits and vegetables, and many other perishables get a royal setting in this handsome Koch case. The extra-wide, full length mirror reflects the massive display. The finest case of its type on the market, at any price. A sure bet for spurring sales.



**MODEL 306**

The last word in modern food merchandising. Three sales-making shelves, each with its own refrigeration system, each with full-length fluorescent lighting. Full-length mirror behind upper shelf. Built to give endless years of reliable, trouble-free service.



**MODEL 5710**

A versatile case that sparks sales for pre-packaged fresh meats, produce, dairy products, delicatessen, bottled beverages, and many other perishables. 10-ft. long. Open front. Full length plate glass mirror. Huge refrigerated storage space in lower compartment.

# EXTRA WIDE! EXTRA LARGE! EXTRA PROFITABLE! THESE EXTRAORDINARY KOCH CASES

More room for more display . . . and that means more sales. These big, handsome, self-service display cases are just right to ring the cash register in the modern market. They are easy to sell. They provide a combination of beauty, dependable service, and economy of operation. Into each is built the quality that has made KOCH the "buy-word" since 1883. Make your own comparisons and you'll agree that you can't beat KOCH design, KOCH workmanship, and KOCH quality. Get the facts on the complete KOCH line and see why KOCH is the profit-line for you.

## KOCH Refrigerators

NORTH KANSAS CITY 16, MO.

SINCE 1883

Send Today for Details  
and Open Territories

Serving THE REFRIGERATION  
INDUSTRY Since 1919



**Specify Acme  
For Top Performance**

- FREON SHELL AND TUBE CONDENSERS
- DRY-EX WATER CHILLERS
- HI-PEAK WATER COOLERS
- FREON SHELL AND COIL CONDENSERS
- HEAT EXCHANGERS OIL SEPARATORS
- INDUCED DRAFT COOLING TOWERS\*
- EVAPORATIVE CONDENSERS
- LIQUID RECEIVERS
- BLO-COLD INDUSTRIAL UNIT COOLERS
- PIPE AND FIN COILS
- AMMONIA CONDENSERS

\* A new Acme product with outstanding features. Write for Catalog No. 40

Write for first catalog on any of the above items

**ACME INDUSTRIES Inc.**  
JACKSON • MICHIGAN

Representatives in principal cities





**No wonder they're excited!**

Kelvinator 1950 Masterpieces have 11 to 12 cu. ft. of cold space in the floor space of pre-war "6's"

GET MORE . . .

*Get* **Kelvinator**

THE MOST VALUABLE FRANCHISE IN THE APPLIANCE INDUSTRY

KELVINATOR, DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT 32, MICHIGAN



## Avery Election--

(Concluded from Page 1, Column 4)  
sales manager, Indiana district, American Blower Corp., Indianapolis.

Members elected to three-year terms on the Committee on Research, which directs the ASHVE research program at its laboratory in Cleveland and at cooperating universities and colleges, are: Robert C. Cross (re-election), assistant manager, Merchandise Testing and Development Laboratories, Sears, Roebuck & Co., Chicago; Richard S. Dill, chief of the Heating and Air Conditioning Section, National Bureau of Standards, Washington, D. C.; Arthur J. Hess, president, Hess-Greiner & Poland, Los Angeles; and Harold A. Lockhart, chief engineer, Bell & Gossett Co., Morton Grove, Ill.

## Dr. Winslow Awarded Medal by ASHVE

NEW YORK CITY—Dr. E. A. Winslow, editor of the *American Journal of Public Health* and professor emeritus of public health at the Yale School of Medicine, has been selected as the 1949 recipient of the F. Paul Anderson medal of the American Society of Heating and Ventilating Engineers, it has been announced.

The award is presented for "outstanding contributions in the field of heating, ventilating, and air conditioning."

Presentation to Dr. Winslow, a past president of ASHVE, will be

## They Assume New Roles as Deepfreeze Expands Into Appliances



L. J. SORESEN  
Vice Pres. & Gen. Mgr.



B. G. SANDERSON  
General Sales Mgr.



P. R. LOWCHER  
Refrigerator Sales Mgr.



F. L. SACHA  
Range & Water Heater Sales Mgr.

made by Alfred E. Stacey, Jr., president of the ASHVE, at a banquet on Jan. 25 during the society's 56th annual meeting in Dallas.

The award was established in 1930 by the late Thornton Lewis of Philadelphia, also a past president of the society, and is presented to ASHVE members in recognition of notable scientific achievement or outstanding services in the heating, ventilating, and air conditioning field. Since 1932 only seven awards have been made.

Dr. Winslow is well known for his work in defining the physiological problems in the field of the heating, ventilating, and air conditioning engineer and in directing research of the physiologist and engineer.

He has conducted researches and

published numerous papers on the relation of atmospheric conditions, including ventilation, to human health and comfort and is the co-author with L. P. Herrington, director of the Pierce Laboratory, of a book "Temperature and Human Life," published last year. He is a graduate of Massachusetts Institute of Technology.

Dr. Winslow was chairman of the New York Commission on Ventilation, 1913-23, and has been editor of the *American Journal of Public Health* since 1944. He is a past president and life member of ASHVE and has served on the Council and many technical advisory committees; currently he is on the committee on physiological research.

## Deepfreeze Changes--

(Concluded from Page 1, Column 2)  
regional sales manager and more recently manager of refrigerator sales.

New manager of home freezer sales is L. O. Braun, formerly with distributing firms in Washington, D. C. Manager of refrigerator sales is Peter R. Lowcher, previously a district manager for Hotpoint. For the past two years he has carried out special home freezer and refrigerator sales assignments for Deepfreeze.

F. L. Sacha, also formerly with Hotpoint, is now sales manager for electric ranges and water heaters. Succeeding Lowcher as New York district sales manager is David A. Barbour. Prior to his appointment he has held posts as distributor sales representative, and sales manager of a retail appliance store in the east.

## Servel Line--

(Concluded from Page 1, Column 4)  
Servel unit. The classic lines of the new Servel refrigerator will appear as fresh and modern through the years as they do today.

"The second important feature is Servel's new quick-change interior. The interior arrangement is so adaptable that it solves all storage problems quickly."

The interior is functional and free of all unnecessary features that "get in the way" of the homemaker. The theory on which the Servel design is based is a refrigerator adaptable to any food storage need, but maintaining a quick, convenient flexibility that would assure its being put to use.

The deluxe Servel 8 and 6-cu. ft. models accomplish this with five special features that make the interior adaptable to individual demands in a matter of seconds. These features make it possible to gain extra space at any point without rearranging the rest of the interior or giving up valuable shelf area. The functional interior does not require unnecessary shuffling of food and shelves.

These special features include a cut-out section in one of the shelves for tall beverage bottles. There is a swing-out partial shelf, a lift out half shelf, and one shelf section is interchangeable.

The new Servels also include additional interior convenience features. All models are provided with frozen food storage compartments. In the deluxe models this compartment is placed across the top, the full width of the refrigerator. It has a roomy storage section.

In all models ice cube tray releases are provided to assure easy removal of trays from the compartment. Special flexible grid releases make the ice cubes pop right out of the tray.

All shelves are made of flat ribbon-type strips to keep foods from tipping. Plastic coating makes them easy to clean and is resistant to rust, chipping, and cracking.

All models except the BN-400 and 600A are equipped with glass covered food fresheners for storing perishable green and leafy vegetables.

The six 1950 Servels include two additions to the line, the BN-850, the standard 8-cu. ft. model, and the BN-600B. These models replace last year's W-800A and W-700.

## Thrifty Appliances Organized

BUFFALO—A business name has been filed in the Erie County clerk's office for Thrifty Appliances, 753 Elmwood Ave., Buffalo, by Teresa Rubertone.

## First of New Women's Roundtable Sessions Opens In N.Y. Jan. 25

NEW YORK CITY—"Culinary Miracles with Electrical Appliances" is the subject of the first of a series of four "Workshops for Electrical Living," Miss Helen Thackeray, chairman of the educational committee of the Electrical Women's Round Table has announced.

Meetings will be held on the last Wednesday of each of the next four months, beginning Jan. 25 in the General Electric auditorium.

"Our purpose in conducting these meetings is to consider advances in nutrition, textiles, and housekeeping in their relation to up-to-date information about electrical equipment," Miss Thackeray said.

"We hope that by correlating these allied fields, we can demonstrate how electrical appliances can be utilized most effectively by the homemaker."

Miss Reba Staggs, home economics director of the National Live Stock and Meat Board, and Mrs. Selma Andrews of the Hotpoint Institute, will open the first meeting with a discussion of "Meat Cookery—The Modern Way." Miss Staggs will talk about new findings in handling meats and Mrs. Andrews will analyze electric range performance.

Miss Barbara A. Sampson of the General Foods Corp. will show how many of the new packaged foods and mixes can be used as demonstration tools for electrical appliances.

Miss Dorothy Shaw of *Woman's Home Companion* and Miss Margaret E. Davidson of *Ladies' Home Journal*, will demonstrate methods to get more use from small cooking appliances.

Mrs. Julia Kiene, manager of the Westinghouse Home Economics Institute, will cover the most recent findings of university research centers on the thawing and preparation of frozen foods.

## Winter Mart Survey--

(Concluded from Page 1, Column 3)

From Boston (where Nathan Lerner of Rockford's said he was buying 50% more than a year ago) to Hollywood, (W. A. Lane reported purchases for Sunset Home Furnishings were up 25% over last year) the report was almost uniformly positive, although Albert Goldberg of Philadelphia reported "less." He represented about 20% of those questioned.

Most visiting buyers agreed that the principal objective for the year is more business, and it will be achieved by more advertising.

One sour note, however, was reports of the muddled hotel situation and lack of accommodations.

SPECIFY  
**DELAVAN**  
WHEN YOU NEED

**VALVE PLATES**

Including plates for most popular makes of CROSLEY, FRIGIDAIRE, KELVINATOR.

**DELAVAN MANUFACTURING COMPANY**

3009 SIXTH AVENUE  
DES MOINES 13, IOWA



# "FREON" ADVERTISING CONTINUES TO PROMOTE YOUR BUSINESS

## SELECTIVE "FREON" CAMPAIGNS

Constant advertising to your best prospects for air conditioning or refrigeration stimulates the further expansion of your business. Kinetic Chemicals, Inc., helps you with this job by directing highly selective campaigns to the men who have the power of buying, recommending or specifying your equipment or service.

## FACT-PACKED ADVERTISEMENTS

For example, Kinetic conducts a continuing survey to learn what architects want to know about air conditioning . . . and these surveys are the basis for a series of informative double-page advertisements in architectural publications. In another field, executives are learning about profitable industrial applications of air conditioning and refrigeration from advertisements regularly appearing in "Modern Industry" and in "Factory." And the safety story of "Freon" refrigerants is forcefully driven home

to frozen-food packers, distributors and retailers through the pages of "Quick Frozen Foods" and of "Food Industries."

## RADIO COMMERCIALS, TOO

Periodically, more than 10,000,000 listeners hear the popular coast-to-coast Du Pont "Cavalcade of America" radio show and specially prepared story commercials about "Freon" refrigerants. A similar story about the advantages and benefits of these superior refrigerants is also told to more than 1,000,000 readers of the Du Pont Magazine in interesting articles.

## AND HERE'S HOW YOU BENEFIT!

Kinetic Chemicals' comprehensive coverage of the market for your equipment or service helps spur constructive thinking about air conditioning or refrigeration. Such thinking by your own best prospects helps lead to the steady growth of the industry . . . and also to increased sales for you.

KINETIC CHEMICALS, INC.  
Tenth & Market Streets  
Wilmington 98, Delaware



# FREON SAFE REFRIGERANTS

"Freon" is Kinetic's registered trade-mark for its fluorinated hydrocarbon refrigerants.



## Information Booklet Covers Questions on Refrigerated Storage

WASHINGTON, D. C.—A new folder describing the functions and importance of refrigerated warehousing in perishable food distribution has just been released by the National Association of Refrigerated Warehouses. It is called "Q. A.—Answers to the Most Frequently Asked Questions About Refrigerated Warehouses."

Q. A. tells its story in 16 brief, concise questions and answers, supplemented with photographs of cold storage operations. The questions are those most frequently asked NARW about refrigerated warehousing and came mostly from editors, students, researchers, teachers, and others seeking information about the industry and its operations.

The folder is printed in two colors and is designed for quick reading or a permanent ready reference. Distribution is now being made through NARW and its members to employees, customers, schools, colleges, civic and religious organizations, farm groups, editors, government, research organizations, etc.

Its purpose goes beyond merely supplying the answers to questions. The information it gives demonstrates the vital role refrigerated warehousing plays in the improving distribution of perishable foods from farm to table. The extent and variety of cold storage services are also brought out.

Copies are available to individuals or groups and may be obtained from NARW members or the NARW office, 608 Tower Bldg., Washington 5, D. C.

## Leo Olear Elected Head of Buffalo Warm Air Group

BUFFALO—The Buffalo Warm Air Heating Association held its annual installation of officers at a dinner meeting in Hotel Markeen. More than 60 members and guests attended.

The following officers were installed: President, Leo Olear; first vice president, Boland Lyman; second vice president, Harry Yost; secretary, William Seelbach; and financial secretary and treasurer, Barney Calkins.

Installed as members of the board of governors were Murton Rodman, Arthur Ritter, Harry Schaefer, Charles Moore, Julius Fischer, Jack Allen, Scotty Seamans, and John Luitink.

The board of governors held a meeting Jan. 18. It was announced the next general meeting of the association will be held in Hotel Markeen on Feb. 8.

## F. C. Steinhorst, Retired Vice President, Is Dead

UTICA, N. Y.—Frederick C. Steinhorst, 61, retired vice president of Emil Steinhorst & Sons, Inc., refrigeration and sheet metal specialty firm, died suddenly at Riviera Beach, Fla., on Jan. 5. He had been in ill health for the past four years.

Steinhorst had been with the Steinhorst firm since it was founded in 1908 until his retirement four years ago.

He was associated with the milk cooler and freezer division of refrigeration products.

## New Benefits Passed Out To Employees of Tinnerman

CLEVELAND—A wage increase, new insurance benefits, and monetary Christmas gifts were presented to all employees of Tinnerman Products, Inc., at the company's annual party.

George A. Tinnerman, vice president of the company, announced the new benefits, stressing the "Tinnerman Plan for Confident Living."

Under it all employees are provided with company-purchased life, accident and health insurance, including medical and surgical benefits.

## Dealers View Hotpoint Line

GRAND RAPIDS, Mich.—Radio Equipment Co., Philco distributor for west Michigan, had a meeting of dealers from 32 counties for a preview on the entire new Hotpoint line for 1950.

## Opening Tie-In

Refrigerator Displayed In  
New Market Sells 7

AUBURN, N. Y.—Setting up a Norge refrigerator stocked with meats, groceries, and vegetables next to the cashier's desk in the new, modern Lane's Hometown Market here resulted in seven sales for O'Brien Appliance Store.

Tying in with market opening activities, Thomas P. O'Brien of the local appliance dealership, offered the displayed refrigerator as a prize, for which the market management passed out tickets with each grocery purchase.

The market, O'Brien said, attracts between 800 and 1,000 persons daily.

"This proved to be an outstanding advertising promotion for Norge," he stated. "Already it has resulted in seven sales and it will continue to help out sales for some time."

## McGuire Bros. Handles Hotpoint

CLARE, Mich.—McGuire Brothers has been appointed as a dealer for Hotpoint appliances here.

## Lower Prices on Volume Coin Meter Purchases Set By International Register

CHICAGO—The International Register Co. here has announced a new price schedule allowing lower prices for volume purchases, on its model DM6 Meter-Matic coin meters for commercial refrigeration applications.

Previously, according to Howard H. Rosenheim, assistant sales manager, the company charged one price—\$16.75 net for the double door model and \$13.45 net for the single door model—regardless of quantity purchased.

Under the new schedule, the same price is charged for purchase of from one to five meters. For six to 11 meters, the rates are \$15.95 and \$12.65 respectively. For from 12 to 95 meters they are \$15.50 and \$12.20 respectively. For 96 meters or more, the rates are \$15.25 and \$11.95.

These prices are net, f.o.b. factory, Chicago, he said. They cover the 120-volt, 60-cycle models. For other voltage and cycle combinations, 35 cents

net is added to the above prices.

According to Rosenheim, dealers buying six meters save approximately 5% and larger scale buyers save up to 10%.

The model DM6 Meter-Matic has a "delinquent payment" feature that prevents the customer from receiving use of his refrigeration unit until all delinquent payments are paid up. The meter will accept 25 different daily payments and has a large coin capacity.

## Gotham RSES Will Play Host To Upstate Chapter Feb. 25-26

NEW YORK CITY—The Empire State chapter of the Refrigeration Service Engineers Society will hold its first annual meeting here as guests of the Metropolitan chapter of the society, Murray Grodner of the Metropolitan chapter announced recently.

The meeting will be held over two days, Feb. 25 and 26, and will include a series of educational lectures, a guided tour through one of the larger refrigeration and air conditioning plants in the city, and a dinner dance at the Hotel Martinique.

## Theater Has Stand-By Cooling System Ready For Emergencies

MARTIN, Tenn.—The new Varsity theater here has everything today's theater should have—the modern architectural styling, excellent lighting and acoustics, and an air conditioning system that cools, dehumidifies, and filters out dust and pollen.

The Varsity seats 1,100 persons and is supplied with 80 tons of direct expansion refrigeration. The system circulates 32,000 c.f.m.

Two Marlo cooling towers were used in the Chrysler Airtemp installation which combines two complete systems in order that each may function independently of the other in case of emergency.

## Soo Equipment Buys Lipsett

SAULT STE. MARIE, Mich.—Soo Equipment Co. has purchased the interests of J. L. Lipsett & Co. here. Refrigeration and International Harvester farm lines are being moved to the new location on U.S.-2.



# SUNISO ENDS EMERGENCY CALLS

Switch to Suniso Oil Eliminates Wax Problem,  
Assures Free Operation of Starting Mechanism

A bakery was experiencing trouble with a 2 hp. compressor used to operate an ice cream maker and hardener. Frequently it failed to start, causing the temperature to rise and the ice cream to melt. Each time, a serviceman had to be called in to overhaul the starting mechanism. Finally a thorough cleaning with heat and chemicals became imperative. When torn down, the refrigeration system revealed heavy wax deposits on the

thermostat valve, solenoid starter, strainers, and coils.

Realizing that the original charge of oil had been causing the damage, the serviceman recommended that the unit be recharged with Suniso. This was done, and difficulty in starting is no longer experienced.

Such dependable performance is the reason why Suniso Oils have long been the predominant choice of original equipment manufacturers throughout the refrigera-

tion and air-conditioning industry.

The different grades of Suniso Oils have extremely low pour points and low wax-separation points. All have exceptionally high dielectric strength and high resistance to chemical change when mixed with Freon or any other modern refrigerant. Ask your Suniso jobber for a free copy of the illustrated booklet "Lubrication of Refrigeration and Air-Conditioning Equipment" or write Department RN-1.

SUN OIL COMPANY • Philadelphia 3, Pa.

In Canada: Sun Oil Company, Ltd.  
Toronto and Montreal

**SUNISO REFRIGERATION OILS**  
"JOB PROVED" THROUGHOUT THE INDUSTRY





# What Was Shown at Winter Home Furnishings Markets In Chicago

## Leonard Line Includes Equivalent of 10 Models

CHICAGO—A complete new 1950 line of Leonard electric ranges with "unusual flexibility in choice of features" was displayed at the American Furniture Mart.

Walter Jeffrey, Leonard sales manager, said the 1950 line included six models, but a choice of accessories on two low-priced ranges made it the equivalent of a 10-model line.

He listed the models and suggested retail prices as follows: LER-509—\$309.95; LER-507—\$279.95; LER-503—\$215.95 (with lamp, clock, and oven control accessory); LER-502—\$195.95 (with lamp, clock, and oven control accessory); LER-541—\$164.95; LER-501—\$154.95.

Prices on models LER-503 and LER-502 vary slightly when equipped with the various accessories.

The line includes four models built to a standard width of 39 in., and two small-kitchen ranges 21 in. wide. Working surfaces on all models are 36 in. high. All are approximately 24 in. deep.

Leader in the 39-in.-width series is model LER-502, with three seven-heat tilt-up surface units, 6-qt. deep-well cooker, two-element oven with automatic pre-heat cut-off, and a roller-bearing utensil drawer.

All these features are included in

model LER-503, plus two additional roller-bearing utility drawers. Readily attachable to either the LER-503 or LER-502 are two accessory "packages"—a lamp and minute-timer that times periods up to 60 minutes, at a suggested retail price of \$9, and a lamp, electric clock, and oven-timer combination that regulates oven operation automatically, at \$16.

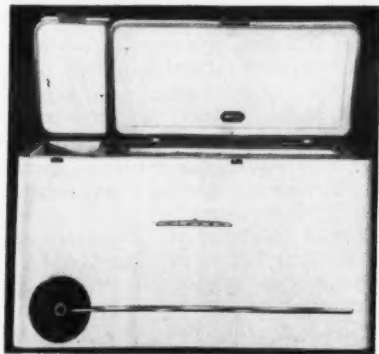
Deluxe styling and features are incorporated in model LER-507, a 39-in. width range with an "Easy-Cook" control panel, recessed and tilted toward eye-level, and equipped with a built-in range-top floodlight. It includes three seven-heat tilt-up surface units, "up-down" unit, and deep-well cooker, with pressure cooker available as an accessory, appliance outlet, two-element oven with automatic pre-heat cut-off, and three roller-bearing utensil drawers.

An electric clock in the center of the control panel times the operation of an automatic oven control. A second timing device, the dual "six and 60" minute-timer, measures intervals from 15 seconds to six minutes, or by "shifting gears," from two and one-half to 60 minutes.

Leonard's top range is model LER-509, with all the features of LER-507 plus the "Automatic Meal-Minder" control. This is an electric-clock-and-automatic-control combination.

Two 21-in.-width ranges for use in small kitchens round out the line.

## Gibson Freezer



Gibson Refrigerator Co. showed at the American Furniture Mart a new 2-compartment, 2-door, 18-cu. ft. capacity home freezer, incorporating a 2.5-cu. ft. sharp freeze compartment.

**EDITOR'S NOTE:** This page of winter mart product showings supplements coverage in the Jan. 16 issue of the NEWS.

## Barlow & Seelig Shows Ironers

New in the Barlow and Seelig space was a stripped version (BX-20) of the deluxe cabinet ironer, priced at \$139.95, and a portable ironer (BP-5) priced at \$49.95. The company's six model washer line is priced from \$79.95 to \$139.95 (Zone 1).



## Frigidaire Cuts Call-Backs!

"We use Frigidaire Parts because they mean greater customer satisfaction and fewer call-backs to eat up our profits," says Dave Surfas, Surfas Refrigeration Co., Los Angeles, Calif.

## Sanitary Refrigerators Feature 'Cradled Power'

CHICAGO—"Cradled power" is one of the features of five new 1950 refrigerators introduced by Sanitary Refrigerator Co. at the home furnishings market. In addition to the five conventional models, Sanitary presented an under-counter model.

The line consists of standard and deluxe models in 6 and 8-cu. ft. capacities, a 4-cu. ft. model, and a 5-cu. ft. "Lo Boy" model built to fit standard cabinetry. F.o.b. factory prices are \$169.95 and \$199.95 for the 6-cu. ft. models, \$199.95 and \$239.95 for the 8-cu. ft. models, \$159.95 for the 4-cu. ft. model, and \$174.95 for the "Lo Boy" model.

On the conventional models, the motors are suspended. Six springs "cradle" the motor inside the housing and absorb starting and shut-off shock. In addition, the motor and housing are mounted in rubber. All have all-steel wrap-around cabinets and double breaker strips.

Main features of the line are: Standard six—three ice trays in U-type evaporator; plastic meat dish, 12.54 sq. ft. of shelf area. Deluxe six—full-width frozen food compartment (holding 43 lbs.), full-width crisper drawer, three ice trays, 9.32 sq. ft. of shelf area.

Standard eight—four ice trays in U-type evaporator, glass meat dish, 14.86 sq. ft. of shelf area. Deluxe eight—full width crisper drawer, four ice trays in full-width freezer locker holding 52 lbs., 13.93 sq. ft. shelf.

Standard four—two ice trays in centrally hung U-type evaporator, plastic meat dish, and 9.84 sq. ft. of shelf area. Lo-Boy—two ice trays in centrally hung U-type evaporator, and 8.2 sq. ft. of shelf area.

Sanitary also showed three freezers which had been introduced earlier. They come in 8.2, 12.5, and 16.8-cu. ft. capacities, and are priced respectively at \$279.95, \$352.50, and \$459.95.

## Marquette's Models Offer Complete Price 'Step-Up'

Two new refrigerators were introduced by Marquette Appliances, Inc., at the market, bringing the number in the line to six, providing a complete "step-up" in price series, according to company officials.

The model U85 G "Budgeteer" model provides 8½ cu. ft. of storage space in a full-door model. It has a large "U" type freezer, glass tray meat saver, and full-width refrigerated fruit storage bin. Refrigeration is supplied by a Tecumseh "pancake" condensing unit. It is priced at \$193 f.o.b. the factory.

Other new model is a 10-cu. ft. cabinet with across-the-top freezer, twin crispers, glass shelf cover, and 16.5 sq. ft. of shelf area. No price has been established as yet on this model.

Marquette's range line is completely new, with five electric and five gas models. These include 20-in., 36-in., and 40-in. models, with such features as waist-high broilers, and the latest accessories such as glass oven doors, and pop-up surface units.

## Estate Stove Improves 5 Divided-Top Ranges

Being shown by Estate Stove Co. was an improved line of divided-top electric ranges. Called the 5000 series, the line consists of five models as follows:

Model 5010 with standard features and utensil drawer—\$189. (\$25 extra for lamp and oven control assembly). Model 5012 with automatic-control of oven and appliance outlet, chrome fluorescent top lamp, minute minder, utensil drawer—\$249.95.

Model 5014 with above features plus "hide-away grid-all" and individual Tel-U-Lites for all surface units—\$299.95. Model 5016 (double oven) with additional features of automatic control of either oven, "Bar-B-Kewer," fourth unit or appliance outlet through selector switch, fourth top unit replacing cooker, and oven light and window—\$349.95. Model 5018 with the additional feature of a built-in pressure cooker—\$359.95.



## Whirlpool Drier Provided With Safety Gas Shut-Off

Retail price of the new Whirlpool gas clothes drier was set at \$249.95. Robert M. Mitchell, sales manager of the Nineteen Hundred Corp., announced at the opening of the winter market.

The model is automatic, simplifying operation and providing safety. The housewife never strikes a match to ignite the pilot light; instead, she simply turns a switch, which lights an electric coil. This, in turn, lights the pilot, which opens a valve to the main burner, starts the flow of gas, and begins the drying cycle.

If the gas flow to the pilot stops, the valve closes, cutting off the supply to the main burner. If for any reason at all either gas or electricity is cut off, everything ceases. If a fuse blows while the machine is going, he said, action will be halted.

## Winter Mart Briefs

### 'Universal' Line

The new "Universal" household refrigerators being distributed by Refrigeration Sales Co., headed by Harry M. Parsons, were shown in the Landers, Frary & Clark space at the American Furniture Mart.

The Universal household refrigerator line consists of four 9-cu. ft. models, three 8.2-cu. ft. models, with prices starting at \$199.50.

Six freezer models are also being sold by Refrigeration Sales Co., including the new "Index-A-Freezer," a 12-cu. ft. freezer featuring the Adjust-A-Interior and Index-A-File, to permit the housewife to conveniently change the interior arrangement and easily find any item.

### 'Executive' Models

An "executive-type" table-top refrigerator for offices, finished in a dark oak or mahogany finished steel, with Formica or white top, was introduced by General Air Conditioning Corp.

It has 4.2-cu. ft. capacity, a center evaporator, and a dry-storage bin. Retail price is \$219.50.

Also introduced by the company was a table-top combination range and refrigerator, a 3-burner 220-volt range, taking range wiring, and listing at \$249.50.

### Coolerator Kitchen

In addition to its new freezer with 3½ cu. ft. of normal refrigerated space, the Coolerator Co. showed a "5-foot" kitchen, consisting of a 24-in. wide refrigerator, a 20-in., 3-burner electric range, and 15-in. storage cabinet. This is a compact kitchen center designed to interest builders.

### Automatic Washer Co.

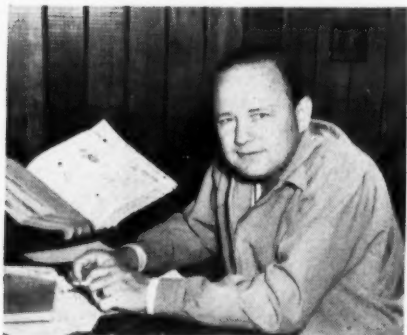
In the washer field, Automatic Washer Co. displayed its 1950 line consisting of the following models: 500, \$89.95; 501, \$99.95; 502, \$119.95; 503, \$139.95; 504, (spin dry) \$139.95; 509 (gas engine) \$159.95; 482 (Duo-Spin) \$159.95; and 485 (Press-Top), \$179.95. These are Zone 1 prices.

### Square-Tub Washer

Altorfer Bros. Co. showed its new model 420, described earlier in the NEWS, for the first time. This is a wringer-type washer of square tub design with a full apron.

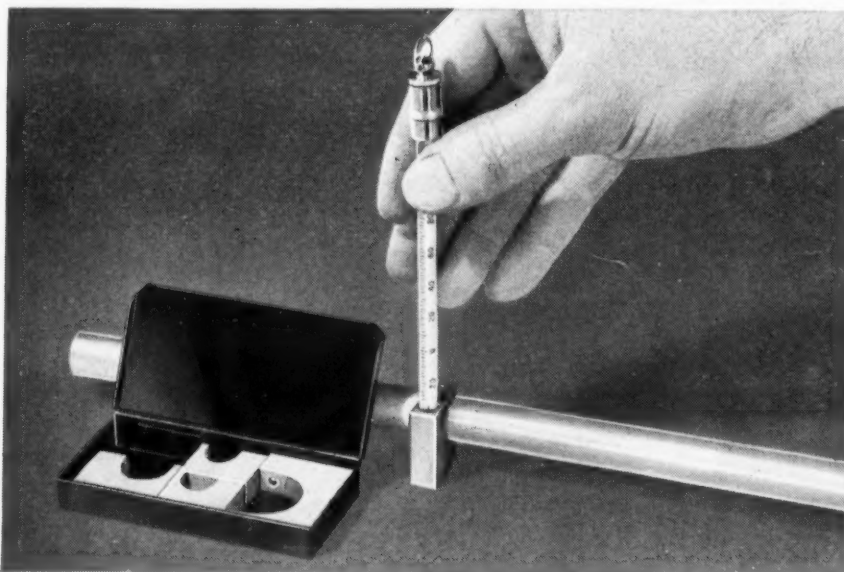
## CUT DOWN COSTLY CALL-BACKS—USE FRIGIDAIRE SERVICE PARTS!

Call-backs and adjustments can take all the profit out of repair jobs—so why risk them? Get every job done right—with Frigidaire Service Parts. They're built to the same high standards as original equipment—in a full line that gives you exactly the right part for any job. And they're easier and faster to install because they're made to fit. You'll find that Frigidaire Parts not only protect your profit—they build your reputation for quality work.



## Insures Profits With Frigidaire!

"Inferior parts always mean expensive call-backs that cut profits and irritate customers," says L. W. Scott, Refrigeration Sales & Engineering Co., Inc., Oklahoma City, Okla. "That's why we've used only Frigidaire Parts for the past 18 years. Nowhere else can we find quality that even comes close."



For fast, accurate temperature readings—Frigidaire Clip-On Thermometer Wells

You'll find these Frigidaire Clip-On Thermometer Wells are real time-savers. They enable you to check refrigerant and water line temperatures quickly and accurately with standard pocket thermometers. And they're easy to use—even in close quarters—because they're amazingly compact. The four standard sizes cover

virtually all your requirements.

Your nearby Frigidaire Parts Distributor has Clip-On Thermometer Wells in a handy pocket-size package, consisting of a sturdy metal carrying case with two ½" wells and one each ¾", ¾", and 1½" wells. Or you can purchase any of the wells individually.

## FRIGIDAIRE Parts and Accessories

FRIGIDAIRE DIVISION  
General Motors Corporation  
1418 Amelia Street, Dayton 1, Ohio. (In Canada, Leaside 12, Ont.)  
Please rush my free copy of your parts catalog—"Genuine Precision-Built Frigidaire Parts and Accessories."

Name.....  
Firm Name.....  
Address.....  
City.....County.....State.....



## Using Frigidaire Parts Pays Off!

"It's just good business to buy Frigidaire Parts," says Henry Marcus, Utility Sales & Engineering Co., Oak Park, Ill. "It pays off for us in fewer repeat calls—in easier, faster jobs—in customer good will."

## FREE! Frigidaire Parts Catalog →

For full information about all Frigidaire Service Parts and Accessories, write today for your free Frigidaire Parts Catalog.



## 100% Pre-Packaged Meat Section



Sales of salad dressings, ketchups, and meat sauces have been more than doubled by displaying them in a double-tiered shelf above the 80-ft. long continuous self-serve meat case at King's Sooper supermarket in Denver.

## Snow Crop President Sees 35% Increase In Frozen Foods Sales Volume for 1950

NEW YORK CITY—With orange juice concentrate setting the pace, the production and sale of frozen foods during 1950 will soar to new records, J. I. Moone, president of Snow Crop Marketers, predicted recently.

During the next 12 months, the sale of frozen foods will increase more than 35% over those of the record year of 1949, he said, explaining that the greatest gain will be in orange juice concentrate which may represent as much as 50% of the total sales volume for all frozen foods.

Attributing reduced prices, which have made high quality frozen foods available to more families in the middle income groups, as one of the principal factors for the recent surge in frozen food sales, he said that efforts to lower production and distribution costs wherever possible will be one of the main objectives of the

frozen food industry during this year.

Moone's statement follows:

"The healthy condition of the frozen foods industry as we begin the new year indicates that 1950 will be the best year the frozen foods industry has ever enjoyed. We look forward to increases in dollar volume of approximately 35% over 1949 for the industry. This optimism is predicated on the fact that orange juice concentrate, which is leading the industry in sales volume today, will continue to favorably influence the movement of fruits and vegetables and other staple frozen food products in ever-increasing volume. Illustrative of this, production of Snow Crop orange juice concentrate is planned at triple that of 1949. Furthermore, the concentrators as a whole have tremendously expanded their production facilities for 1950 and we are all confident that these large increases in production can be success-

fully marketed to the American Housewife during 1950.

"Orange juice concentrate today represents about 35% of the aggregate volume of staple frozen foods sales in 1949. The natural selling aspects of orange juice concentrate lead us in the industry to believe that it may represent up to 50% of the total frozen food sales volume this year. Fruits and vegetables while showing substantial increases have not kept pace with the acceptance the consumer has shown to orange juice concentrate.

"Inventories in the industry are short because of the rapidity of turnover experienced during the past six months. Production of most frozen products will have to be strained to the utmost to meet increased demand at the lower prices.

"Advertising and promotion have been substantially increased by most major producers, which means that frozen foods are being sold to the public in a more emphatic and aggressive manner than ever before. The advertising emphasis will continue to stress convenience, quality, and economy of frozen foods to the housewife."

## Moistureproof Labels, Stainproof Trays and Cold Cellophane Boost Sales

DENVER—Several novel features in self-service meat merchandising are pulling extra sales volume for King's Sooper supermarket, at 38th and Irving St. here.

Lloyd King, who pioneered self-service refrigerated fresh meats in a suburban store several years ago, has installed an 80-ft., continuous display Weber refrigerated case along the right side of the Denver store.

All meats sold are 100% packaged, from the largest roasts down to luncheon meats, fish, and poultry. Each is shown in stainproof white cardboard trays, overwrapped in LSAT cellophane which is kept refrigerated at 0° before use, to prevent stickiness and condensation.

Moistureproof labels are printed in varying bright colors, red identifying beef, green pork, etc., so that it is easy for the housewife to spot the meats she wants.

All meat cutting and packaging is done in an air conditioned cutting room, with stainless steel walls, which customers are invited to visit at will.

All meat saws, grinders, and the like are set up in a cluster in the center, with butchers and packaging girls working in a circle around it. Stainless steel carts are used to stock the cases.

One of the big refrigerated display's most unusual features is a double tier of gleaming white shelves over the self-service area, in which meat sauces and dressings of all types are featured.

Here, handy to the shopper, are mustard, ketchup, mayonnaise, Worcestershire sauce, spice, chili sauces, as well as all canned meats carried by the store.

Sales of dressings and sauce have more than doubled due to this method of display, according to the management.

## So. California Contractors Association Changes Name

LOS ANGELES — Refrigeration Contractors Association, Inc. has changed its name to Refrigeration & Air Conditioning Contractors Association of Southern California, Inc., according to a recent announcement.

It is explained that the new name more clearly indicates the nature of the business done by the association members and agrees with the name of the national organization with which the local group is affiliated.

Offices of the association remain in the Bendix building, 1206 Maple Ave. here.

## Chase Plans Broad Advertising Campaign

CINCINNATI—The Chase Industrial Refrigeration & Engineering Co. plans an extensive advertising campaign for its commercial refrigerator doors, it was announced by Chase Blum, owner, at a three-day sales conference of 20 company sales engineers here recently.

The concern operates manufacturing plants in Escanaba, Mich. and Reading, Ohio.

## NEW HEAVY DUTY BEVERAGE COOLERS THAT SHOW WHY JORDON IS A LEADER



## EASY-QUICK CAP DISPENSER PULL-OUT UNIT

All the nuisance taken out of cap disposal by this simple snap-out device. Pull-out dispensing unit is a service man's dream. Entire unit slides out giving complete access to all sides and parts. All JORDON design is equally thoughtful and smart!



## 1950 MODEL—JORDON UPRIGHT STORAGE-FREEZER

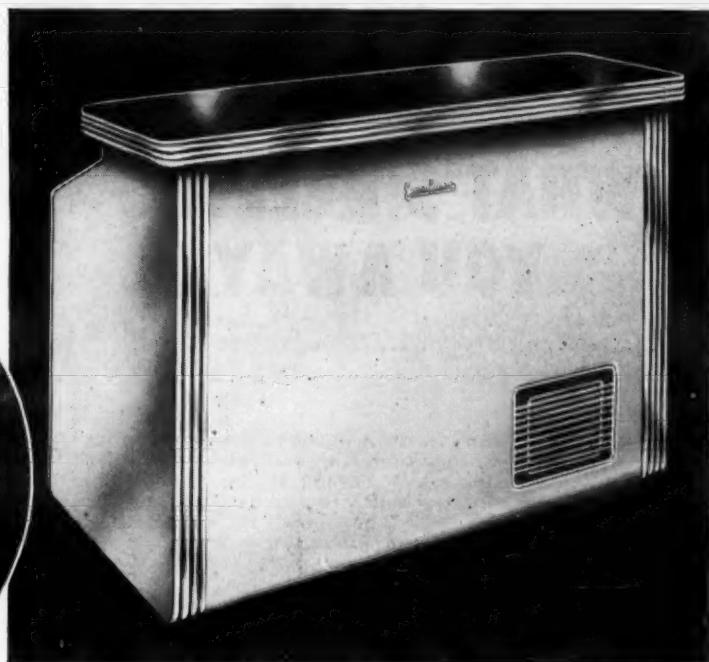
18 cu. ft. model which provides large, conveniently placed shelf areas for FAST FREEZING and STORAGE of frozen products. Correctly designed to operate at SUB-ZERO temperatures. Model U-18 illustrated. Height 70 3/4". Width 44". Depth 28 3/4". Three compartments with individual doors. Capacity: 18 cu. ft. Exterior: JORDON Hi-Baked White Auto-body enamel. Interior: Aluminum finished.

## STAINLESS STEEL OR NEW METALLIC GREEN EXTERIOR

JORDON breaks the new year wide open with these really sensational models—ready for immediate delivery. They've got the quality, the features, and the PRICE you want for volume business. Sizes: 4'6"—6'3"—8'1". Self-contained, hermetic sealed units

with 5-year warranty. Ready for plug-in operation. Large blower fan and heavy duty coiling gives fast, complete cooling. Wide top opening allows fast bottle stacking and easy access to contents. Capacities: 12 to 37 cases of 12-oz. bottles.

Illustration to right shows complete self-contained Beverage Cooler & Serving Bar with Panelite counter top.



## ... IT'S GOING TO BE A BIG YEAR for JORDON Dealers

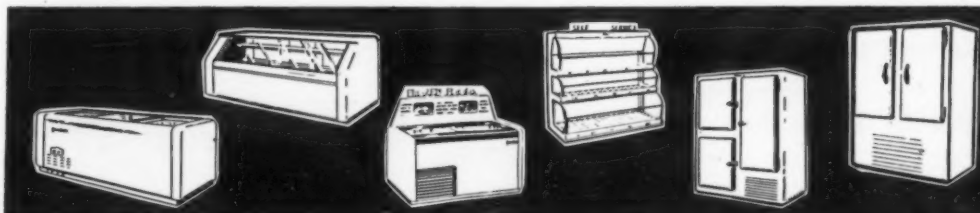
- ★ JORDON dealers will have a FULL LINE to sell every market — every prospect.
- ★ JORDON dealers will have vigorous backing with smart ADVERTISING and sound MERCHANDISING.
- ★ JORDON dealers will be backed by INCREASED PRODUCTION and FAST DELIVERIES.
- ★ JORDON dealers will be kept ahead of the times with NEW MODELS — NEW IDEAS — SALEABLE UNITS PRICED RIGHT for volume business and fast turnover.

See the JORDON LINE on Display At the Chicago Merchandise Mart Space 14101

We will be glad to talk to you about a JORDON dealership if your territory is not now represented.

## THERE'S A WIDE MARKET FOR THESE JORDON FULL VISION CASES

They give you an opportunity to pick up much new business in many fields where FULL VISIONS fill the bill exactly. TWO SIZES for immediate delivery. Model FV-4' and FV-6'. Self-contained or remote. Sliding rear doors on 6' model. Bright fluorescent lighting. Adjustable shelves.



**JORDON**  
AMERICA'S MODERN COMPLETE LINE  
**JORDON REFRIGERATOR CO.**

Factory and Sales Division  
58th St. and Grays Ave., Phila. 43, Pa.

CABLE: "JORDONREF"

BEIgrade 6-4510

EXCLUSIVE EXPORT DISTRIBUTOR: CANNON & MILLER, 55 W. 42ND STREET, NEW YORK • CABLE: CANANWILL



## A Spectacle No Grocer . . . Could Afford To Miss

# Unusual Food Merchandising Clinic Benefits Everyone, Especially the Host, Detroit Refrigerator Mfg. Co.

By George M. Hanning

DETROIT—Tired, physically "beat out," with his "five-o'clock shadow" rapidly approaching six o'clock, Lee Hayes slumped back in his chair and managed to smile.

"It's not hard to put on a show like that. It's easy! All you have to do is to let other people help you."

He meant what he said, but his sleep-laden eyes told more than words that he had put a helluva lot of work into the show, which had wound up in the wee hours of that morning.

Hayes is president of the Detroit Refrigerator Mfg. Co., Hussmann distributor for the greater Detroit area. The show he spoke of was a three-day food merchandising clinic staged in his brand new quarters at 640 W. Eight Mile Road, Ferndale—just over Detroit's northern boundary.

The clinic had been sponsored jointly by Detroit, the Associated Food Merchants of Greater Detroit, and the American Meat Institute.

Object of the show, from Hayes' point of view, was to acquaint local grocers with his new place of business and, incidentally, with the products and services he has to sell.

The way he went about it was somewhat unusual—and very effective. He arranged a spectacle no grocer interested in the progress of his own business could afford to miss and heralded it with an advertising campaign that was designed to reach every food merchant in his territory

To indicate how well his idea worked out, an estimated 6,000 persons visited his plant during the three-day period of the clinic.

About 3,500 crowded Hayes' establishment on Sunday afternoon and evening. About 1,500 dropped in on Monday evening, and another 1,000 braved slush, a heavy snowfall, and freezing temperatures to catch the final Tuesday evening performance.

Though advertising distinctly stated that the show ran from 7 to 11 p.m., Hayes noted that late arrivals were pounding on his door at midnight and later for a chance to get a look at the exhibits. It was 2 and 3 a.m. every night before he could get away from the plant.

What did the clinic have to offer that drew such overwhelming response?

Billed as the most "outstanding food merchandising clinic ever held in Detroit," it tried hard to live up to its advertising.

On the program was Jack Milton, sales service director of the American Meat Institute, a familiar figure to many Detroit butchers, who advised audiences of grocers of the national advertising sponsored by the Institute and what it was doing to help them.

There was also Jack W. Dickie & Associates of Toledo, widely known consultant on pre-packaged meats who detailed the advantages and

problems of handling self-service meats and demonstrated how even rough cuts of meat can be presented attractively through self-service.

Around this nucleus was built a colorful array of exhibits presented by nearly 50 firms who, according to Hayes, recognized this as a splendid opportunity to present their wares (canned foods, dairy products, meat products, display materials, check-out counters, and other similar items) to grocers.

According to Hayes, they were invited to participate in the show without any charge for exhibit space. Many made use of the refrigerated cases in Detroit's showroom for the purpose of setting up their food displays.

Food distributor and meat packer salesmen turned out in force to take advantage of this occasion to meet customers and prospects.

There was even one firm there, Eddie Barr Associates, of Detroit, to demonstrate its "realistic illustrations," a sales aid in the form of a stereoscope.

How was a show of such magnitude promoted by a single commercial refrigeration distributor?

The answer lies in Hayes' statement quoted at the beginning of this article. He let other people help him.

He worked cooperatively with the Associated Food Merchants of Greater Detroit through its president,

## 'Shrimp Jamboree' Highlights Social Events At Delta Wholesalers' Annual Meeting



Newly elected officers of the Delta Refrigeration Wholesalers Association get together around a big pile of shrimp at the "Shrimp Jamboree," which was the top social event of the annual convention. The officers are (left to right): Miss Hazel McQuiston of United Refrigeration Supply Co., Memphis, Tenn., secretary-treasurer; Harry Dawson of Acme Refrigeration Supplies, New Orleans, vice-chairman; Robert P. Gennett, of Refrigeration Supplies Distributor, Birmingham, Ala., chairman; Robert E. Warwick of Plumbing Wholesale Co., Jackson, Miss., director of Region 12 to REWA; and the hotel manager.

George C. Schleicher, and energetic chairman of the education committee, Alex C. Bell, to obtain the speakers and line up the other exhibitors. He also worked with them and the American Meat Institute in advertising the event.

Major piece of promotion was a 44-page book that was prepared by all three organizations and mailed directly to 3,500 selected grocers.

The book was called "The Meat Team" and used editorial material prepared by the American Meat Institute, plus stories on the proposed food merchandising clinic and the advantages of belonging to the local food merchant's group.

Advertising was solicited from 60 firms serving the food fraternity. Detroit and the association shared the tasks of getting the advertising. All revenues gained from these sales were turned over to the treasury of the association, Hayes revealed.

*The Grocer's Spotlight*, a trade journal serving the Michigan and Ohio areas, offered to prepare and did prepare a double page advertisement that appeared in the issue published just prior to the clinic.

As if this were not enough, Detroit mailed 8,000 personal invitations to grocery store owners and others in the local food trade to attend the show.

The results have already been described.

In fact, beside local grocers, the affair drew visits from Charles Bauer, president of the National Association of Retail Meat Dealers, with which the local association is affiliated, and Mayor Bruce D. Garbutt of Ferndale. Thomas Wallace and Lynn LaRoe of the American Meat Institute also attended.

Hayes knows from years of experience the rewards to be reaped by providing the food trade with information and services that will help grocers sell more food at a profit.

But he did not have long to wait to collect his first dividend from this affair. Less than 12 hours after the last visitor straggled out of the showroom, Hayes' telephone rang.

At the other end of the line was a creamery salesman. The salesman had been working an exhibit in the show the day before. He was now at the new place of business of a dairy bar operator. The dairy man had just remarked that he had not yet placed an order for refrigeration equipment.

If one of Hayes' salesman would come right over. . .

"Ken," Hayes shouted to a salesman just walking out the door, "take down this address and hop right over there. Get that customer and. . ."

**BRUNNER**  
SINCE 1906

**AIR CONDITIONING** builds business

## WHAT'S KEEPING YOU AWAY

from Air Conditioner Profits?

### PRODUCT

Brunner self contained floor type room air conditioners are available in 4 popular sizes—3, 5, 7½ and 10 ton. Completely Brunner built...backed by 44 years of engineering "know how." By every standard of comparison an outstanding product worthy of your confidence.

### INVOLVEMENT

Packaged air conditioning is simple to sell, install and service. No involved technical knowledge is required. Recommendations are determined through a few easily figured facts. Packaged air conditioning is a natural part of any refrigeration and appliance business.

### SALE HELP

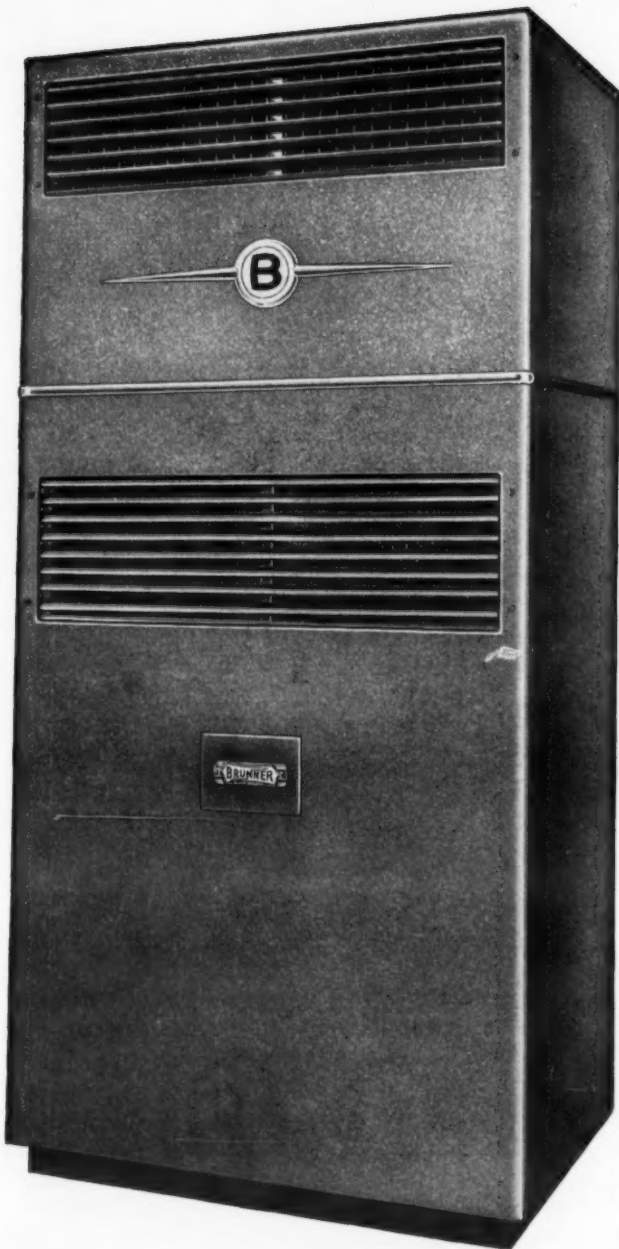
Brunner field-sales engineers are so located across the country as to be readily available to help on every occasion when called upon. Brunner advertising to "users" in many fields has paved the way to recognition and acceptance of Brunner as the top value in air conditioning.

### MARKETS

All around you! Practically every business depending upon store traffic, wants and needs air conditioning. The opportunities are legion. The Brunner field man will show you how to contact and close sales.

### PROFIT

Brunner Air Conditioning builds business...yours and your customer's. Don't let this extra income pass you by. Write or wire for a Brunner representative to spread the facts before you. You can't miss recognizing the superiority of Brunner Air Conditioners as a product and as a new business opportunity.



**BRUNNER**  
SINCE 1906

**AIR CONDITIONING**

- Self Contained 3 HP. to 10 HP.
- Remote Type 5 HP. to 75 HP.

BRUNNER MANUFACTURING CO., Utica 1, New York, U.S.A.

REFRIGERATION CONDENSING UNITS by

AIR AND WATER COOLED MODELS—a size and type for every purpose...¼ HP. TO 75 HP.

**BRUNNER**  
SINCE 1906

**Gloekler**

**Model 2 FDI**  
**25 Cubic Foot**

**Model 2 FDF (Blower)**  
**Also Available**

Reach-In refrigerators from 20 to 45 cu. ft. with either blower or ice cube maker coil.



**Model 6-9**  
**ADD-TO**  
**Storage**  
**Refrigerator**

Special sizes of Storage Refrigerators now available.

**Manufacturers Agents**  
**wanted for**  
**several territories.**

**Gloekler REFRIGERATOR COMPANY**  
ERIE • PENNSYLVANIA



## Radio Dead?—See Al Robertson

## Dealer Does Volume Appliance Business by Placing Small 'Slogan' Ads In Newspapers Nearly Every Day

OKLAHOMA CITY — Consistent use of one-inch newspaper advertisements, which feature easily-remembered slogans instead of extravagant claims, is the appliance retailer's best bet in setting up an advertising program, according to Al Robertson, of Al Robertson Appliance Co., local Westinghouse dealership here.

While Robertson has been engaged in appliance retailing for only a little less than five years, he is already in the front ranks of the Sooner city's dealerships. The company has consistently led Oklahoma City in sales of particular appliances, including washing machines, home freezers, and, during more recent years, television receivers.

Last summer, the dealer completely reviewed his operating methods, as compared with pre-war and postwar periods. Major goal in making this review was to organize the business for more economical operation in the face of dropping prices and "tighter money."

"At the same time, we determined to build up still more our service departments, which actually put us in business," Robertson said. "Our ultimate idea was to offer the customer the maximum in goodwill-building service, and a store which operates at top efficiency with no lavish wastefulness."

Newspaper advertising, naturally, came in for careful scrutiny, under the "view to the future" plan.

Unlike many appliance dealers, the Robertson organization has never made heavy use of display newspaper advertisements, tie-in advertisements sponsored by distributors or manufacturers, or similar "large-space promotion." Instead, the store has depended since its beginning on one-inch advertisements, placed at easily-seen points in Oklahoma City newspapers, to put across specific slogans.

Included are such simple messages as: "We sell Westinghouse!"—"Radio dead?—See Al Robertson!"—"Robertson gives free estimates!"—"Fixed while you wait."

Of this line-up of slogans, one of which appears almost daily in two or three local newspapers, none has been as popular as the "Radio dead?—See Al Robertson" type. These small advertisements, which also appear in the telephone directory, have brought a flood of requests for radio repair service.

Incidentally, many of the sales which rolled up the \$165,000 volume of 1948, are credited entirely to radio repair customers originally attracted by this advertisement.

Before determining what type of advertising would be most successful in future years, Robertson carefully studied all other methods. Although the project was launched with the idea of changing it if necessary, it was found that no type of advertising

could be more cheaply operated in view of the results, than the current program.

Therefore, the firm is continuing the plan, and is budgeting 3.3% of total sales volume, directly to advertising.

"We allocate of this amount 3% for newspaper advertising, and try to appear almost every day in the year," Robertson said. "The 0.3% is spent for direct mail, special window displays, long distance telephone calls, and stunt promotions of various kinds."

"Through studying the results of our one-inch 'reminder advertisements' we have found that these actually have pulled in more customers and resulted in more immediate or direct sales, than the usual large dis-

## Knoxville Dealers Sold More Major Appliances In October Than In Same Month of 1948

KNOXVILLE, Tenn.—Sales of refrigerators, home freezers, ranges, and clothes washers during October were well above the level of the same month last year though off somewhat from September, reports of local dealer sales by the Knoxville Utilities Board revealed recently.

Sales of all other major appliances were below both October, 1948, and September. Only exception was waste disposal units where two were sold in October as compared with one in September.

Data was compiled from 28 dealers in October, 27 dealers in September,

Appliance	October, 1948		October, 1949	
	Units	Value	Units	Value
Home Freezers	3	\$ 1,530	5	\$ 1,400
Refrigerators	152	42,884	320	78,337
Ranges	156	39,844	241	57,769
Water Heaters	73	9,604	61	7,576
Dishwashers	6	1,900	2	740
Waste Disposal Units	12	2,499	2	249
Washing Machines	104	17,720	254	42,815
Ironers	12	2,019	11	1,815

and 23 in October, 1948.

As compared with October, 1948, washing machine sales were up 144%, refrigerators 110%, home freezers 67%, and ranges 54%. Ironer sales were down 8%, water heaters 16%, dishwashers 67%, and waste disposal units 83%.

Held against September, range sales were off 1%, refrigerators 8%, washing machines 19%, water heaters 26%, ironers 42%, home freezers 76%, and dishwashers 77%.

Unit sales and total value for October, 1949 and October, 1948 are as follows:

play advertisement. For that reason, we have steadily increased our newspaper lineage from a little more than 8,000 lines five years ago to around 24,000 lines last year."

The chief requirement of the appliance retailer in profiting from newspaper advertising is "keeping it different," Robertson emphasized. Too many dealers, he believes, "take the easy route" by merely adding a line of type identifying their store to mats sent out by manufacturers, which may be duplicated in the same issue of the newspaper by three or four other firms.

"It takes a lot of individuality to make the customer remember a specific advertisement," he said. "For example, for several years we have been receiving orders for repair work and queries on new appliances which are addressed simply to 'Radio Dead, Oklahoma City, Okla.'"

"This proves to us that where the store name will not stick, a simple slogan of this type will be retained in the customer's memory. Therefore, plenty of one-inch advertisements, identifying the store, wrapped around a slogan, and occasionally featuring nationally-advertised appliance lines, are the most economically successful advertising the appliance retailer can use."

## Franklin Furniture Plans \$500,000 Store Expansion

SYRACUSE, N. Y.—An expansion program to cost an estimated \$500,000 for new buildings and remodeling of present structures has been announced by Franklin Furniture Corp. here, which deals in appliances and radios.

The program includes the remodeling of the interior of the store at 216 W. Genesee St. and erection of a new front. Plans also call for extensive remodeling of the firm's store at 601 Erie Blvd., E. The general offices will be moved to this location from W. Genesee.

Franklin stores in Rome and Oneida also will be modernized, it was announced, and a new store will be built in Norwich. The expansion will cover a period of two and a half years and eventually will result in 10 Franklin stores in upper New York State.

## New Merchandise Mgr.



STANLEY J. STEPHENSON

## Stephenson Gets Range Post at Westinghouse

MANSFIELD, Ohio—R. M. Beatty, manager of the electric range department of the Westinghouse Electric appliance division, has announced the appointment of Stanley J. Stephenson as merchandise manager for electric ranges.

Stephenson will be responsible for the development and execution of sales programs for Westinghouse electric ranges.

A native of Salt Lake City, Utah, Stephenson attended the University of Utah where he graduated in 1941 with a Bachelor of Science Degree.

He joined the Seattle, Wash., branch of the Westinghouse Electric Supply Co. that year and in 1942 was commissioned an ensign after attending U. S. Naval Midshipman School at Columbia university. He served 23 months with the Navy in the Pacific and ended his service career as a lieutenant.

In January, 1946, Stephenson rejoined the Westinghouse Electric Supply Co. office in Seattle and in August was transferred to the Yakima, Wash., office.

In June, 1948, he was made sales promotion manager of the Wesco Omaha, Neb., office.

# Now Ready! 1950 NATIONAL REFRIGERATOR MARKET REPORT

THE NATIONALLY RECOGNIZED "BLUE BOOK" OF REFRIGERATOR TRADE-IN VALUES

IT'S ACCEPTED BY THE MANUFACTURERS

JUST OFF THE PRESS!

THE TRADE-IN "BLUE BOOK" INSURES PROFITS ON SALES BECAUSE:

1. It lists and illustrates over 2300 models of domestic type refrigerators so that they may be readily identified by the dealer. Guesswork as to age or model is eliminated.
2. It gives a fair, conservative value to each model listed and eliminates the danger of excessive allowances.
3. Its neat and complete make-up impresses the dealer... and in general its appearance and lists serve as an effective antidote for the customer's inflated sense of value of his "trade-in". SEEING IS BELIEVING!
4. Its trade-in appraisal values are designed to let the dealer MAKE A PROFIT on his replacement sales.
5. It contains a complete editorial section which tells the dealer how to trade refrigerators profitably.

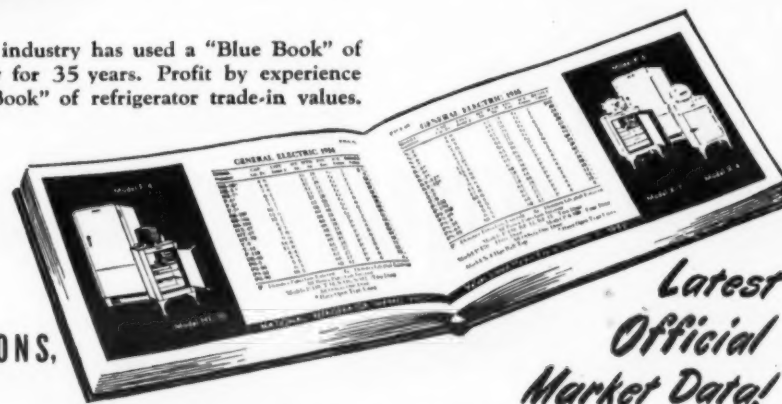
One trade-in properly executed on the basis of prices established in the Blue Book will pay for the cost of a book many times over.

"THE ORIGINAL" . . published since 1938



The automobile industry has used a "Blue Book" of Trade-Ins successfully for 35 years. Profit by experience and use the "Blue Book" of refrigerator trade-in values.

- LISTS OVER 2300 MAKES AND MODELS
- ASSIGNS FAIR TRADE-IN VALUES
- COMPLETE ILLUSTRATIONS, SPECIFICATIONS
- FREE DEALER SERVICE BUREAU • TELLS HOW TO RECONDITION TRADE-INS



Latest Official Market Data!

ORDER NOW \$5.00 EA.

Please send at once \_\_\_\_\_ copies of the NATIONAL REFRIGERATOR MARKET REPORT Enclosed Please Find: ☐ Check ☐ Money Order

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

NATIONAL REFRIGERATOR MARKET REPORT, Inc. Dept. AC-1, Post Office Box 606, Los Angeles 24, Calif.

This book may be obtained from your distributor or refrigerator manufacturer... or you may order direct by using this convenient coupon.

Mail with your check or money order. We pay the postage.

Copyright 1950



## Coldmobile Co. Designs New Refrigeration Unit For Milk Delivery Trucks

DETROIT—Weighing only 125 lbs. installed, a new truck refrigeration system designed specifically for retail milk delivery trucks has been developed by Coldmobile Co. here, announces Henry Kirkpatrick, president.

The system will be available at a net installed price of \$317.40, when installed at the Coldmobile plant here, according to Kirkpatrick.

It is claimed that the system will cool the body down at the rate of 3° F. per minute and maintain the load at 40° F. with a 100° F. ambient.

"Less complicated than even the simplest household refrigerator mechanism," explains Kirkpatrick, the system does not take up any payload space in the truck, and can be operated at a cost of only a few cents a day.

Providing continuous refrigeration in transit, the system is comprised of standard refrigeration components, stated Kirkpatrick.

## Lewis R. Mellem Joins G-E Range, Water Heater Div.

BRIDGEPORT, Conn.—Lewis R. Mellem has been appointed commercial engineer of the General Electric range and water heater divisions, J. R. Poteat, division manager has announced. He had been acting in that capacity since last February.

## 'Lush' Appearance Undisturbed

# Central System Cools Lower Floors, Individual Units Handle Upper Levels at Saks Fifth Ave.

NEW YORK CITY—A method of providing complete air conditioning to an existing large store without sacrificing appearance, floor space, or feasibility of maintenance marked the installation of a combination of central station and individual unit cooling equipment in Saks Fifth Avenue, renowned specialty shop, last spring.

The air conditioning system, designed by Charles S. Leopold of Philadelphia and installed by Raisler Corp. of New York City, provides 1,135 tons of refrigeration. Walter F. Spiegel and Bruce Olsen supervised the field installation of this project for Leopold.

The basement and first floors of the department store are served by conventional central station type apparatus, whereas the nine upper floors are conditioned by a total of 34 specially designed and essentially identical pre-fabricated units.

Unlike the equipment normally used in decentralized systems, these units incorporate all of the provisions found in the larger, custom built, central type apparatus.

Each unit is complete enclosed on a suspended, waterproofed, reinforced concrete plank platform permitting unrestricted maintenance of the equipment. This arrangement allows the space underneath to be utilized for departmental offices,

small shops, and stock space.

The significant features of these particular units include a single fan with backward curved blades, specially designed isolated suspension of the fan and drive assembly for quietness of operation, electrostatic filtration preceded by stationary mechanical filters which may be cleaned in place by a central vacuum cleaning system, non-ferrous coil spray system, and stainless steel eliminators.

The chilled water for all the dehumidifiers "is cooled by two electrically driven centrifugal refrigeration machines in the sub-basement. The condenser water is recirculated through an induced draft cooling tower on the roof.

## COOLING TOWER BLENDS IN

Because of the building's position near Rockefeller Center, the appearance of the tower was considered important. Corrugated transit was used in the construction to blend the tower into the skyline, at the same time reducing the required maintenance.

The conditioned air itself is distributed through a system of ductwork, generally around the perimeter of the floors. It is returned through ducts into the plenum composed of the unit enclosure.

Each unit has its own set of automatic controls, but the introduction

of additional outside air for mid-seasonal operation can be centrally controlled by one switch in the refrigeration room in the basement.

The operation of fans, filters, and sprays can also be remotely controlled at a master board. Room thermostats located in the area served by each unit maintain constant optimum temperature throughout the store.

That optimum temperature is considered to be 76° F. with 50% humidity during the summer and 74° F. with 30% humidity during the winter.

Refrigeration is provided by two large Worthington centrifugal units, one of 647 tons capacity and the other of 488 tons capacity. These units operate in two stages to chill water in a closed system that does the actual air cooling job.

## SMALL UNITS MASS PRODUCED

The refrigerating equipment cools 2,720 gals. of water per minute from 53° F. to 43° F. "Freon-11" is used as the refrigerant.

Condensing of the refrigerant is accomplished by 200,000 gals. of water per hour. Under peak operating conditions, water is pumped from the refrigerating units in the sub-basement up to the roof and to the cooling tower at 95° F. In the tower it is cooled to 85° F. and returned to the condenser.

The chilled water in the closed system is pumped from the refrigerating apparatus to two large conditioning units in the basement and the 34 other units on the upper floors.

The individual units are all the same size, 19½ by 8½ by 6 ft. and are all identically equipped, thereby providing a savings to Saks because the units could be produced on a near mass production basis.

Each is equipped with fresh air intakes, room air intake ducts, cooling coils, Westinghouse electrostatic air filters, blower units, and outlet ducts. The Buffalo Forge blower fans in each of these units have a capacity of 13,500 c.f.m.

Every one of the individual systems is also fitted with steam heating coils and air by-pass. When air by-pass is not sufficient to get the desired results, reheat is used in summer months for humidity control.

## PLENTY OF CONTROLS

A variety of controls are employed in these units to meet all eventualities. A main thermostat maintains the correct temperature. A low limit thermostat keeps the air from becoming too cool. A dewpoint-stat keeps the air at the correct humidity. A safety-stat prevents the system from freezing, and two fire-stats shut the unit off in case of fire.

The basement cooling units contain the same equipment as the smaller ones, but have a 49,500 c.f.m. fan to serve the first floor and a 36,285 c.f.m. blower to serve the basement.

The fact that Saks has built a reputation as a rather exclusive clothing shop, offered some problems to the installer. For instance, some of the floors contain luxury salons for the showing of expensive dresses. These salons are almost like private rooms and are very richly furnished and decorated.

Therefore, the workmen had to be extremely careful not to mar the furnishings and make the air outlets inconspicuous as possible, he noted.

Despite the enormous size of the system, it was installed in six months time without the loss of sales space or at any time interrupting the operation of the store, according to Adam Gimbel, Saks president.

## Boring To Fit In System



Workmen's heavy schedule of drilling to complete job was maintained despite fact that hospital maternity rooms were adjacent.

## High-Speed Concrete Drills Aid Installation In Los Angeles Hospital

LOS ANGELES—Tilden Tool Mfg. Co.'s rotary "Konkrete Kore" drills played a key note in the installation of a new air conditioning and heating system to serve the main delivery rooms and surgeries of Los Angeles County's huge general hospital.

To install the new system, it was necessary to remove more than 25 blocks of concrete, each 18 in. square by approximately 8 in. deep, from the walls and floors of the building. The 18-story building, standing as it does in the earthquake zone of southern California, contains particularly tough aged concrete and has an exceptionally dense network of reinforcing bars.

Each block of concrete to be removed was first outlined by about 45 holes made with a 1-in. Tilden drill, using an ordinary ¾-in. electric drill at 375 r.p.m. The small connecting portions of concrete were then sawed or chiseled free and the block removed.

The removal of each block required the drilling of approximately 30 ft. of concrete, which consumed only about four hours, it was reported. Each drill was said to have averaged 30 ft. of concrete drilled without sharpening.

"As an indication of the quietness of the Tilden drill," the company said, "drilling operations were carried on within 30 in. of delivery rooms while deliveries were in progress. Interference with normal operation of the hospital was negligible."

The job was undertaken by Hugh Robinson & Sons, Los Angeles contracting firm.

Tilden Konkrete Kore drills, which drill concrete at the rate of 2 to 6 in. a minute, are available in sizes from ¼ to 4 in.

**THE 100% ANSWER TO YOUR MOISTURE PROBLEMS**

**CROSS-FLO with Molded Du-Cal Drierite Discs**

**STANDARD-DUTY Driers with Molded Du-Cal Drierite**

New Molded Du-Cal Drierite as the drying agent is guaranteed to retain up to 20% of weight in moisture, even at refrigerant temperatures up to 150° F. without breaking down, powdering, dusting, or allowing any pressure drop.

For heavy-duty requirements, Cross-Flo is the industry's outstanding drier-filter (capacities 1, 2, 3, and 5 Tons). Standard-Duty are low-cost driers with Molded Drierite discs as the highly-efficient drying agent.

Capacities: ¼, ½, ¾, and 1 H.P.

*Literature and Prices on Request*

**REMCO INCORPORATED**  
ZELIENOPLE, PA.

## DISTRICT SALES SUPERVISOR WANTED

Nationally known manufacturer of commercial refrigerators has unusually attractive proposition for aggressive representative for prosperous Illinois-Wisconsin territory. Earnings limited only by ability to develop territory for which the groundwork is already laid. Our own personnel know about this advertisement. Please furnish details experience, education, present connection, etc., in first letter.

Address Box 3391, Air Conditioning & Refrigeration News

# usAIRco-engineers



Upright Conditioners



Room Conditioners



Refrigerated Cooler-air

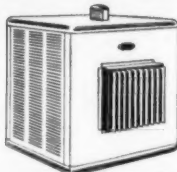
# and manufacturers



Blowers



Unit Air Conditioners

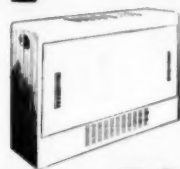


Evaporative Coolers

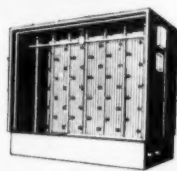
# of dependable



Gas & Steam Unit Heaters

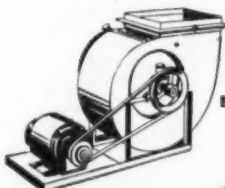


Modu-air

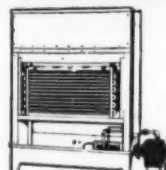


Air Washers

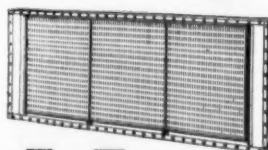
# air conditioning



Exhaust Fans



Evaporative Condensers



Coils

# equipment!

If you want to do things to air . . . heat it, cool it, make it moist, dry it out, clean it, push it into a room or pull it out . . . usAIRco has exactly the equipment you'll need.

We design our machines and units simply, so they're

easy to install. We build them right, so they need little repair or service. We engineer them carefully so they'll do what's expected of them . . . and a little more.

What will you need on your next job? We've got it. The coupon will bring you the data you want.

United States Air Conditioning Corporation  
Como Avenue at 33rd, Minneapolis 14, Minn.

Need information right away on the items I've checked:

( ) Blowers ( ) Evaporative Condensers ( ) Modu-Aire ( ) Coils ( ) Exhaust Fans  
( ) Upright Conditioners ( ) Unit Heaters ( ) Evaporative Coolers ( ) Air Washers  
( ) Refrigerated Cooler-air ( ) Room Conditioners ( ) Unit Air Conditioners

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

Zone \_\_\_\_\_

State \_\_\_\_\_

Send to attention of \_\_\_\_\_



See usAIRco at Dallas Exposition Booth #819, Dallas, Texas, Jan. 23-27, 1950, Southwest Air Conditioning Exposition.



# Selling 'Up' Pays Off for Dealer Who Uses TV Sets To Move Refrigerators



needs. By selling them first on big television, they realize the advantage of a bigger refrigerator. Big television is easier to look at and a big refrigerator is easier to use."

The Mart, located on Xenia, Ave.,

LEFT: Joe Hanen, manager, prepares one of the store's large space newspaper advertisements.

a side street outside of Dayton's main shopping district, is doing a sizeable business in both TV sets and white goods. The store carries Gibson, Philco, Hotpoint, and Admiral refrigerators.

Because of the general interest of the owner and Hanen in fishing, they also stock outboard motors. Last summer they sold 300 of them from one display rack.

Hanen admits the glamor of television has cut into his other appliance sales. He also believes that the seasonal sales trend in refrigerators appeared in full force in 1949 and was responsible for poor Christmas selling in white goods. But his salesmen still average five to eight thousand dollars a week in sales and last summer the Mart was selling an average of five or six refrigerators per day.

Salesmen at the Mart are all floor men. Following a consistent policy of large space advertising in local Dayton newspapers, Hanen credits that with pulling in his prospects.

Every customer, he says, walks in the front door without any outside canvassing. Then, it's up to the



O. E. Dills, veteran salesman, gives Jack Bender, a new man, some sales pointers. The store has no formal sales training program.

salesmen. His amount of advertising is based on a steady 4% of gross volume and he writes and places

every advertisement.

Customer convenience is the keynote of the Mart's selling. It stays open five nights a week until 9 p.m. There are soft drinks for prospects and to add convenience and comfort, there are three Gemco air conditioners—a 1, a 1½, and a 6-ton unit.

Hanen says he wouldn't be without air conditioning. "With air conditioning, the customer can shop in comfort and it also helps our salesmen keep on their toes."

Formal sales training is not used at the Mart. Instead, the older salesmen instruct the younger men and supervise them until they can sell by themselves. Typical of the older salesmen is O. E. Dills, a 27-year sales veteran.

Dills declared, "Although we usually advertise lower priced boxes, we show them only if the customer asks for them. We're continually selling 'up' and find it really pays off."

"We know it's important to know what you're talking about, particularly prices. Any salesman in the



Jack Bender tries out what he learned from his older instructor. Selling "up" is one of the keys to the store's success.

store can quote the price of any item without looking at the price tag. We find that's a big advantage when the prospect is really interested."

## Refrigerators Just Out Of Warranty Become Object of Campaign

COLUMBUS, Ohio—A \$3 "Ten-Point Refrigerator Special" checkup on Norge domestic units out of warranty has proved to be a business stimulator for the Callander-Lane Co. here.

Robert Pugh, service manager, said that the company sends out about 40 letters per day to Norge refrigerator owners whose boxes are one-year old or older offering them the check-up. A return postal is attached to the letter.

The checkup consists of:

1. Check and adjust the door seal.
2. Adjust the door latch.
3. Clean the condenser.
4. Check to eliminate noise and vibration, adding sound deadening springs.
5. Check the temperature and running time.
6. Check the wiring.
7. Check the cold control.
8. Furnish complete check sheet report on the condition of the refrigerator.
9. Free demonstration of the effectiveness of Norgloss polish.
10. One 75-cent can of Norgloss polish free.

Pugh said that results of the promotion have proven increasingly satisfactory.

## LOOK TO LARKIN For Efficiency



### LARKIN HALF-TURRET HUMI-TEMP

Efficient operation makes a product easier to sell on one hand; builds solid customer satisfaction on the other. Precision engineering—only the best materials—skilled craftsmanship—and almost 25 years experience in commercial and industrial refrigeration—all add up to higher efficiency for every Larkin product. And this means lower operating costs—important to buyer and seller alike.

Manufacturers of the original Cross-Fin Coil—Humi-Temp Units—Evaporative and Air Cooled Condensers—Air Conditioning Units and Coils—Direct Expansion Water Coolers—Steel Vacuum Plate Coils—Heat Exchangers.

WATCHDOG OF THE NATION'S FOOD SUPPLY  
**LARKIN COILS**  
519 MEMORIAL DR., S.E. • ATLANTA, GA.

## Admiral Plans To Produce 300,000 Electrical Ranges And Refrigerators In 1950

CHICAGO—Admiral Corp. is going "all out" in the field of electric ranges and refrigerators this year with an ultimate goal of 300,000 units, President Ross D. Siragusa told nearly 800 distributors, dealers, and salesmen at the opening of the company's largest national convention here recently.

Addressing the group at the Drake hotel, Siragusa said that the sales campaign of these units and the company's new television line would be backed by a \$15,000,000 advertising campaign in newspapers, magazines, and TV.

Siragusa said that his company, which started with a sales volume of \$240,000 in 1934, had a sales total of \$112,000,000 in 1949.

## Canadian Factories Set Output Record for Electric Refrigerators In September

OTTAWA, Ont., Can.—A record for production of electric refrigerators was set by Canadian factories in September, it was reported here recently.

The Bureau of Statistics has reported that Canadian factories turned out 16,733 refrigerators in that month compared with 12,349 in the same month of 1948.

The total output for the year up to the end of that month was 130,945 as against 99,736 in the first nine months of 1948. Production of washing machines was down to 28,342 in September from 30,707 a year ago. However, the nine-month period saw 260,618 units produced compared with 232,365 in the same period of the previous year.

Canada exported 876 washing machines, bringing the total for the year to 10,105. Imports amounted to only 10 units and 179 in the nine months.

Exports of electric refrigerators in September amounted to 909 units while imports were 47, bringing the nine-month exports to 10,142.

## REFRIGERATION & AIR CONDITIONING UNITS • PARTS • TOOLS • SUPPLIES

Get ALL your needs delivered to your door by fast AIRO service. Save time and money Write for catalog 49A on your letterhead.

**AIRO SUPPLY CO.**  
2732 N. ASHLAND AVE., CHICAGO 14, ILL.



## ADDED "SALES MAGIC" in the "Magic Touch"

INLAND'S "ROCK-OUT" FEATURE WILL BUILD SALES AND PROFITS FOR YOU IN 1950!

Something different has further increased the customer appeal of Inland "Magic Touch" Ice Trays! It's the "Rock-Out" feature, shown above. The user simply raises the "Magic Touch" lever... then "rocks" the grid to one side, exposing a whole row of freed ice cubes, to be used now or later.

The "Magic Touch" idea itself set an absolutely new standard of ice cube convenience. Now the "Rock-Out" feature attracts still more customers, helps close more sales, builds bigger profits for YOU!

National advertising will pre-sell your customers. A strong 1950 campaign of national magazine advertising, with a balanced appeal to men and women, will pre-sell prospects, your prospects, on the marvelous convenience of the "Magic Touch" with the extra "Rock-Out" feature. Cash in on this consumer demand. Make sure that the refrigerators you stock and display are factory-equipped, completely, with "Magic Touch" Ice Trays.

Easy replacement sales for quick profits. Many of your prospects are now getting along with outmoded, inconvenient ice trays. Show them "Magic Touch" Trays with the "Rock-Out" feature. You'll make many replacement sales, for quick and easy profits. And you'll build customer good will for later refrigerator sales!

New refrigerators fully equipped with Inland "Magic Touch" Ice Trays give your customers complete ice convenience



"Magic Touch" Ice Cube Trays  
by **INLAND** MANUFACTURING

INLAND MANUFACTURING DIV., General Motors Corporation, Dayton, Ohio



Customers understand "Rock-Out" convenience instantly!



Raise "Magic Touch" lever



"Rock-Out" the grid



Use one or more cubes



## INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)  
Quickly the amanuensis interrupted him.

"You call those two characters 'gentlemen'?" she demurred. "Since when? I used to work for both 'em, and I guarantee you they ain't gentlemen."

### Gag of the Week

An ice cream manufacturer in the midwest advertises:

"Take home a brick. You might have unexpected visitors."

### Quotes of the Week

"It is a hard rule of life, and a healthy one, that no great plan is ever carried out without meeting and overcoming endless obstacles that come up to try the skill of man's hand, the quality of his courage, and the endurance of his faith."—THOMAS JEFFERSON.

"I believe that we face today a struggle of ideas and not of arms and that if we can win that struggle we need not have the tragedy of another war."—SENATOR ROBERT A. TAFT of Ohio.

"To be an intelligent communist is impossible. To be an intelligent progressive is very difficult. But the hardest thing of all is to be an intelligent conservative."—COUNT SPORZA, Italian Foreign Minister.

"The essential ingredient of democracy is not doctrine but intelligence, not authority but reason, not cynicism but faith in man, faith in God. Our strength lies in the fearless and untiring pursuit of truth by the minds of men who are free. This I do believe."—DAVID LILIENTHAL, Chairman of the Atomic Energy Commission.

"When a boy Edward Bok asked his father which was the hardest word in the English language. Without a moment's hesitation, the father answered, 'No.' 'No?' young Bok echoed in surprise. 'Exactly,' he answered. 'Not in spelling, as I suppose you mean. But you will find as you go along that it is the hardest word in the English language.'"—Christian Herald.

Only people who do things get criticized."—Wesley News.

### It Pays to Repeat

"One morning the president of a manufacturing concern called for proofs of the company's advertising. He wanted to quote some of the statements in a letter.

"A number of advertisements were placed on his desk by his advertising manager.

"No, no," he exclaimed impatiently, "these won't do; these are old ads!"

"Don't they give the statements you want to quote?" the surprised advertising manager asked.

"Why yes," replied the president.

"Then are they 'old' ads? The facts don't grow old," ventured the advertising manager.

"It is so easy to lose respect for yesterday's advertisements just because there are some newer ones. In fact, it is so easy that many advertisers stop running their 'old' advertisements before they have appeared long enough to register on the public mind.

"On the other hand, many of the most successful advertisers have built their businesses on 'old' ads run again and again and again—until it seems as though everybody must know them by heart. Which is when they really begin to produce."—Rogers & Slade Management Briefs.

### Television and the Housewife

"There's only one trouble with having a television set," avows the typical housewife, "and that is, I never seem to get any of my housework done!"

With the continuous improvement of daytime programs, this problem shows no signs of abating. It seems to the ladies that hubby is just doomed to come home to a messy house, a sinkful of dirty dishes and no supper.

Here is where the appliance dealer steps in with a solution. By following up his television sales, he can introduce the housewife to many labor-saving appliances on the market. He can show her how an automatic washer and ironer will save hours on laundry time, how a freezer will cut down her shopping time to a minimum, and how an electric range will cook meals almost automatically—while she avails herself of the tempting opportunity for more television-viewing leisure.

That television sets may be keeping the little woman at home almost too much is indicated by reports from many servicemen. They declare that when repair work is necessary on a television set the lady of the house often insists that the work be done at the shop. It seems that she wants to get the set away from her house so that her husband will take her out to the movies or a night club for a change!

### Percentages In Selling

Who was the better base-runner, Ty Cobb or Max Carey? The great Georgia Peach stole 96 bases to set an all-time record. He attempted to steal 134 times in that season, however, so his average was only a terrific 71%. In 1922 Max Carey of the Pittsburgh Pirates compiled the second best record, 51 stolen bases in a season. He tried to steal 53 times, got put out twice, so his average of success was 96%. On this basis of the averages Max Carey was a better base-runner than Ty Cobb.

In some fields, the percentage is important. In others, such as selling, it is a lot more important to get those extra 45 successes even if it means 36 more failures. It's the total that counts, not the averages—usually.

### Air Conditioning Can Save Us

Because the world is getting warmer, a new "dark age" may be coming for the United States and central Europe. This gloomy forecast has been made to the American Association for the Advancement of Science by Dr. Clarence A. Mills of the University of Cincinnati.

Dr. Mills points out that the world goes through hot and cold cycles—which require about 2,000 years to run their appointed courses—over and over again.

Cold periods are times of high civilizations. Warm periods are bad for the human race.

Historically, that is.

"Once again," he states, "temperatures are surging irregularly upward. The civilized world's temperatures reached levels in 1930 about as high as prevailed 1,000 years earlier. All records available indicate that earth temperatures have been rising for a full century, bringing milder winters and the long summers of depressive heat that sap human energy and change the course of nations.

"The same semitropical lethargy which earlier engulfed the Mediterranean countries is today creeping northward over the United States and central Europe."

Horrible thought, eh?

There's one thing we have now, though, that could prevent another "Dark Ages" period for the human race.

And that's air conditioning.

Looks like an ever-expanding market for our industry!

### Ode (Owed) to Salesmen

"It has been said that salesmen are a big problem to their bosses, their wives, to conservative credit managers, to hotels, and sometimes to each other.

"They live in hotels, on trains, in automobiles, on buses, and in cabs. They eat all kinds of food, drink all kinds of liquids—good and bad; and sleep before, during, and after business.

"In many ways they are a tribute unto themselves. They draw and spend more money with less effort and get smaller value out of it than any other civilized group in business. They come at the most inopportune time, under the slightest pretext, stay longer under more opposition, ask more personal questions, make more comments, put up with more inconveniences and take more for granted under greater resistance than any other group or body, including the U. S. Army.

"They make more noise and mistakes, correct more errors, adjust more differences, cause more divorces, explain more discrepancies, bear more grievances, pacify more belligerents and lose more time under high pressure (without losing their temper) than any class we know, including ministers.

"They introduce more new goods, dispose of more old goods, load more freight cars, unload more ships, build more factories, start more new businesses and write more debits and credits in our ledgers than any other group in America.

"And when Buyers find themselves in a tight spot they usually pick out, from among salesmen friends, one of several in whom they repose complete confidence for counsel and advice. And they get it—clean and straight.

"ARE YOU A SALESMAN?"

"YOU CAN BE PROUD OF BEING A SALESMAN!"—S. S. KAUFMAN.

### Deserves Attention

Fighters For Freedom—a non-profit, non-political movement, is enrolling citizens across the nation in a "grassroots army" which promises to belabor Washington bigwigs against socialistic legislation.

Started only a few months ago as a division of the Committee For Constitutional Government, FFF already has thousands of enlistments in every state. Announced goal is a membership of 1,000,000 Fighters For Freedom by mid-1950, and indications are that this mark will be reached.

Headquarters for this unique "citizens' army" are in New York and Washington, although local committees have sprung up in Detroit, Pittsburgh, Milwaukee and other cities. Further local organization of this "army" obviously is essential. Helpful literature for those interested in organizing local branches can be obtained from Fighters For Freedom, 205 E. 42nd St., New York 17, N. Y.

Avowed purpose of the FFF is to fight highly organized left-wing movements which are pressing our government deeper into socialism. Dr. Willford I. King, chairman, emphasizes that this program is above party politics. It's concerned primarily with the welfare of the entire nation, rather than any particular group.

At least 70 per cent of all American citizens are opposed to socialistic legislation. The Fighters For Freedom movement is taking the lead in organizing these quiescent citizens and taxpayers into a powerful voice to let Washington know how the nation feels.

This "grassroots army" includes doctors, lawyers, teachers, wage-earners, farmers, housewives, merchants—all who feel that only through "yelping" can their individual voices be welded into a powerful roar.

Following is the platform for the FFF movement:

"I realize that those who have lost freedom have not the strength to regain it, and that those who have it seldom realize, until too late, how easily their freedom can be lost beyond recall. Therefore, I believe it to be the duty of every American, and especially of our officials and elected representatives, to:

"1. Pitilessly expose Communism; deport or imprison all conspirators striving to overthrow our Government; and stop the march to Fascism or Socialism.

"2. Restore the American incentives to work, own, and save, and the old rewards to individuals for producing more and better services and material goods; defend their human rights to hold, use, and dispose of all property honestly acquired; and protect the property and income of all citizens from seizure or confiscation.

"3. Protect every individual's right

to work where he will, his right to bargain and contract as he wishes, his right to quit when he will, if not under contract, and his right to go to and from his home and his place of business or occupation without interference by any individual, organization, or government agency. Eliminate mass-picketing, rioting, and terrorism. Restore and protect the right of every individual to enjoy freedom and the fruits of his own efforts.

"4. Safeguard our system of free, untrammelled, competitive markets, and apply anti-trust laws fearlessly and equally to all monopolies, both of business and labor.

"5. Stop using taxpayers' money to compete against private enterprise.

"6. Build down Washington's swollen bureaucratic Big Government; strengthen State and local governments and free them from Federal financial and administrative control. Reduce the Federal payroll by discharging needless job-holders. Stop the waste of public funds. Balance the budget.

"7. Protest against politicians' buying votes by promising Federal Aid for education, socialized medicine, and public housing, which results eventually in Federal Control.

"8. Stop inflation—the process which, by cheapening the dollar, defrauds all thrifty Americans who have insurance policies, social security cards, bank deposits, or investments. Stop deflation—the process which throws millions out of work and bankrupts employers. Encourage, not penalize, thrift. Keep American citizens solvent.

"9. Abolish or reduce immediately those taxes which especially hinder saving and capital accumulation. These are essential for expanding old enterprises and providing new and better tools, and for financing new inventions and new risk-taking, job-making enterprises which assure increased production and higher income for wage workers and others. Limit by Constitutional Amendment the peace-time taxing power of the Federal Government.

"10. Preserve the Constitution with its Bill of Rights, and oppose all attempts to violate it by legislation, usurpation, or evasion."

You can always depend on



10 hp., Ammonia Unit

General Refrigeration Division

Yates-American Machine Co.,  
Beloit, Wis.

demand

## DETROIT CERTIFIED VALVES and CONTROLS

THE ONLY NAME THAT BRINGS YOU ALL 3



No. 673 Thermostatic Expansion Valve

No. 683 Solenoid Valve

No. 450 FB3 Pressure Control

For One Convenient Source Deal with Authorized DETROIT Wholesalers!

## DETROIT LUBRICATOR COMPANY

5900 TRUMBULL AVE.  
DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary Corporation

DETROIT HEATING AND REFRIGERATION CONTROLS • ENGINE SAFETY CONTROLS • FLOAT VALVES AND OIL BURNER EQUIPMENT • DETROIT EXPANSION VALVES AND REFRIGERATION ACCESSORIES • STATIONARY AND LOCOMOTIVE LUBRICATORS

Serving home and industry. AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS  
DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TONAWANDA IRON

Check the BEN-HUR Dealer Franchise NOW—  
as your FIRST NEW YEAR'S RESOLUTION!



BEN-HUR 12.5 cubic foot Model 2129 with BEN-HUR BLUE Trim. Others—9.2 and 18.45 cubic foot sizes.

Guaranteed by Good Housekeeping

BEN-HUR MFG. CO. DEPT. AC, 634 E. KEEFE AVE. MILWAUKEE 12, WISCONSIN

BEN-HUR FARM and HOME FREEZERS

HEALTHFUL LIVING THROUGH FROZEN FOODS



# Dealer Encourages Used Box Purchasers To Turn It In on New Refrigerator

BOSTON—Setting up a trade-in policy which permits appliance purchasers to buy a used refrigerator, use it for several months, and then turn it in at full price on the purchase of a new refrigerator, has helped to step up refrigerator volume for the R. H. White Corp., appliance dealer here.

The R. H. White Corp. claims to be the first dealership in the Boston area to accept trade-ins on refrigerators, and through steady operation of a reconditioning shop, and a "re-sale outlet," the store has been able to make many sales which might have been lost without the trade-in facilities.

"More than 40% of our new refrigerator sales now involve trade-ins," an official pointed out.

"Each of the boxes included in this 40% however, actually shows two profits, or at least full profit on the new box—entirely because we operate our own trade-in department."

Realizing the pitfalls of trade-in operations, the White company put all of its outside salesmen through a comprehensive training course, during which each learned approximate cost for replacing compressors and parts, the usual charges for repainting and installing new hardware on any make of refrigerator, and finally, the approximate amount for which any rebuilt, reconditioned refrigerator could be sold.

This program, run on a serious "school basis" occupied several weeks. At the end, each salesman was quizzed as to his trade-in knowledge. Plenty of "night work" and retraining was used until each was a qualified "trade-in estimator."

Under the White plan, it is no longer necessary for a specialist to go out and look over a trade-in box, before making an allowance.

Instead, each salesman carries a "blue book" prepared by the store, which gives the proper amount to be

offered by the salesman for a box of a particular year, make, and condition.

The salesman can "draw a profile" on these three points, which will indicate accurately how much allowance can be made to permit a profit on the resale of the used box.

"Invariably our allowance to the customer is more than the bluebook valuation, which is based on minimum considerations," it was indicated. "We point this out to our new refrigerator purchasers, and most of them are well pleased."

In the Boston store's warehouse is a complete reconditioning shop, which includes metalizing tanks for replacing worn metal surfaces on refrigerator shelves, interior hardware, ice cube trays, etc.

Here, every refrigerator is torn down, thoroughly tested, repainted, new hardware installed, and otherwise brought "back to life."

Every box undergoes at least a 36

hours test, and is guaranteed for 90 days.

A complete history of the work done on the refrigerator appears on the sales tag which accompanies it out of the repair shop—so the salesman can point out precisely to his prospect the step-by-step job which was done.

Instead of selling used refrigerators along with new boxes in the store's refrigerator showroom, however, all the old boxes are transhipped to the warehouse store in a suburb of Boston, where they are advertised as "bargains for the bargain-minded customers."

Here, refrigerators may be priced anywhere from \$25 to \$125, depending upon the age, make, and amount of reconditioning which went into them.

Due to the presence of many low-income families there is plenty of market for guaranteed, low-priced refrigerators, and the store finds that

few remain on the showroom floor more than a week.

Realizing that trade-in refrigerator sales cut off an opportunity to sell a new box, White's has taken care of this problem by a "trade-back" policy.

Under the plan, if the customer buys a used box from the store, and uses it for several months, he is entitled to trade it back at the original price whenever he feels that he can afford a new refrigerator.

This offer is carefully explained to each customer, with the result that there are many refrigerator owners regarding their reconditioned boxes as "loans" until funds are scraped up for the purchase of a new one.

A surprisingly high percentage of the reconditioned boxes are returned, and again reconditioned while the original purchaser buys a new box.

Net results have been steady profit from used-box reconditioning and full profit on every new box sold.

## National Refrigerator Market Report Publishes '50 Trade-In 'Blue Book'

LOS ANGELES—The National Refrigerator Market Report, Inc. has announced that the 1950 edition of its "blue book" of refrigerator trade-in values is off the press and ready for dealers throughout the country.

The trade-in guide is said to list more than 2,300 makes and models with their fair trade-in values. It is complete with illustrations, specifications, reconditioning information, and free dealer service bureau.

The National Refrigerator Market Report was first published in 1938. It was compiled by a number of experts in the refrigerator field, including Herman Hantober, recognized as an authority on refrigerator reconditioning and trade-ins.

Since that time it has been maintained, checked, and revised to provide a manual of information, facts, and figures, the company said. Curtailed during the war years, the first postwar edition was in 1949.

The 1950 edition includes the changes that have transpired since, with particular emphasis on the shift to a buyers' market.

The guide may be obtained from refrigerator manufacturers or distributors or may be ordered direct from National Refrigerator Market Report, Inc., Dept. AC, P. O. Box 606, Los Angeles 25.

Copies are available for \$5 each, with quantity discounts allowed to manufacturers and distributors.

## Kirby Quinn, Inc. Organized

GREENVILLE, S. C.—Capitalized at \$60,000, Kirby Quinn, Inc., has just been organized here to deal in electrical appliances, household equipment, etc. Kirby J. Quinn is president.



All Standard condenser coils have closely spaced fins which greatly increase the capacity. Sizes range from 1/4 to 5 h.p. A S.M.E. approval is available on special order.

Standard also manufactures a complete line of receivers. Write for Bulletin C-3.

STANDARD REFRIGERATION CO.  
332 S. Hoyne Ave., Chicago 12, Ill.



## Omaha Utility Limits Discount Purchase Of Appliances by Permanent Employees

OMAHA, Neb.—The board of directors of the Metropolitan Utilities District has passed a resolution renewing the privilege of buying home appliances, particularly refrigerators and ranges, at a discount for "permanent" employees, but limiting them to the purchase of one major appliance every five years.

The directors also have voted to close the city ice plant, as recognition that the average Omaha home now uses a mechanical refrigerator rather than an icebox.

Purpose of the resolution on employee discounts was to prevent employees from using their discount privilege to get appliances for re-sale at a profit.

The Omaha World-Herald several weeks ago made an investigation revealing that some of the directors of the public utility had purchased a large number of refrigerators at 30% discount over several years' time.

A new question has arisen as to whether the directors, by their new resolution, nullified an earlier resolution granting unlimited discount buying privileges to members of the board.

One interpretation of the resolution is that they did, in view of the fact directors are not "permanent" employees and the new resolution revoked all earlier actions "in conflict" with it.

Another interpretation, however, is that granting of an unlimited discount to the directors was not repealed, so the directors still can buy all the refrigerators and ranges they want at 30% less than the retail price.

The interpretation to be employed, so far as the directors are concerned, apparently is up to MUD's management.

The Omaha World-Herald has made public a suggestion that "if the board members really intend to surrender their discount privileges, or even to limit themselves to one appliance every five years, it would be a good thing for them to say so, in

## Independent Dealers Boost Sales 28% In November

WASHINGTON, D. C.—November sales of independent household appliance dealers were up 28% over November, 1948, the U. S. Bureau of the Census reported recently.

For the first 11 months of 1949, however, they were down 2% from the 1948 period.

November sales were off 4% from October, the bureau also noted.

plain language. . . . That could be arranged easily by passing another resolution. . . . Certainly the two directors who have been the busiest discount buyers ought to be limited in the future. . . ."

The long-discussed move to close the municipal ice plant, which took effect Jan. 1, won by a four-to-two vote.



**OPERATES IN ANY POSITION**—shaft up, down, horizontal, or any intermediate position.

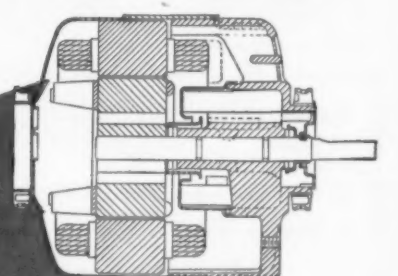
A new lubrication system constantly circulates oil between shaft and bearing, regardless of the position of the motor. Oil-saturated packing continuously feeds bearing with filtered oil—no additional lubrication required throughout its long, service-free life.

**Quiet and light weight**—extremely low noise level. Die-cast aluminum housing reduces weight. Bearing surfaces machined in one set-up—gives permanently true alignment.

**Versatile**—variety of mounting arrangements available; as well as variable-speed operation by using suitable controller.

Ask your nearest G-E sales representative for details. Apparatus Department, General Electric Company, Schenectady, New York.

## UNIT-BEARING MOTOR



GENERAL ELECTRIC

**Here's Your New Harry Alter's DEPENDABOOK No. 151**

**Bargains! BARGAINS!**  
Page after page of bargains in refrigeration parts and supplies—some 60% below standard prices. Everything guaranteed as described—money-back guarantee... 2% discount for cash... Get the new DEPENDABOOK and stock up. Buy your 1950 needs NOW! **WHOLESALE ONLY**

**THE HARRY ALTER CO.**  
1728 S. Michigan Avenue  
Chicago 16, Illinois  
134 Lafayette Street  
New York 13, N. Y.

**REFRIGERATION PARTS CATALOG**

**Service Doesn't Falter When It Comes From Harry Alter**



## They'll Do It Every Time . . . . By Jimmy Hatlo



## Do You Have 'One Foot In the Door'?

# EXPLOSION-PROOF TEMPRITE WATER COOLERS

open  
new markets  
for **TEMPRITE**  
Distributors...

TEMPRITE'S complete line of 10 drinking water coolers now includes an explosion-proof unit which may be installed and operated with complete safety in dangerous, combustible atmospheres. The refrigeration compressor is hermetically sealed and all electrical apparatus and connections are enclosed within Underwriters'-approved, explosion-proof housings. A water cooled condenser is used to obtain the large cooling capacity required for industrial applications and high ambient temperatures.

Sturdy, all stainless steel cabinet panels can be supplied as optional equipment. Temprite's unusually attractive stainless steel top is standard.

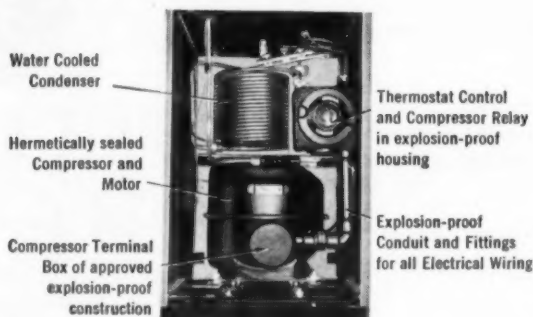
An optional foot pedal attachment operates in combination with a fingertip action water flow control button. Capacity is 10.3 gallons per hour.

WE HAVE ALWAYS gone along with the axiom that the more you have to offer, the more you will sell. That is why Temprite is forging ahead with the production of new models for new applications . . . incorporating new sales features, improving, expanding, and offering distributor salesmen every possible cooperation and sales advantage.

VALUABLE TEMPRITE FRANCHISES are still available, but we urge you to get in touch with us soon, so that arrangements can be completed for an early start in 1950!



COMPLIES WITH all requirements of the National Electrical Code. Meets all Bureau of Standards requirements and all local and sanitary health codes.



### TEMPRITE PRODUCTS CORP.

43 Piquette  
Detroit 2, Michigan

- ☐ Have your representative call to discuss possible franchise arrangements.  
☐ Send me descriptive material covering your explosion proof model  
☐ I am a distributor ☐ I am a service engineer  
☐ I am \_\_\_\_\_

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
COMPANY \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_

"Be right . . . sell Temprite"

# Temprite

PRODUCTS CORPORATION

43 PIQUETTE DETROIT 2, MICHIGAN

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark  
registered  
U. S. Patent  
Office:  
Est. 1926



Copyright  
1950,  
Business News  
Publishing Co.

F. M. COCKRELL, Founder

Published Every Monday by BUSINESS NEWS PUBLISHING CO.  
450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0924.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: \$5.00 per year; 2 years \$8.00. All other foreign countries: \$7.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Please send remittance with order.

GEORGE F. TAUBENECK  
Editor and Publisher

PHIL B. REDEKER, Editorial Director

C. DALE MERICLE, Associate Editor

JOHN SWEET, Assistant Editor

HUGH MAHAR, Assistant Editor

GEORGE HANNING, Assistant Editor

ROY DENIAL, Assistant Editor

Editorial Assistants: MARGARET DEAN,

MARGARET POMMERENING, LOUISE

GINET, AND LORRAINE MAJOR

E. L. HENDERSON, Business Manager

ROBERT M. PRICE, Adv. Representative

ALLEN SCHILDHAMMER, Adv. Rep.

ALLEN S. RUSSELL, Adv. Rep.

BETTY JANE TULLOCH, Adv. Secy.

WALTER J. SCHULER, Production Mgr.

JOHN F. JOLIAT, Circulation Manager

Member, Audit Bureau of Circulations. Member, Associated Business Papers.

VOLUME 59, No. 4, SERIAL No. 1,088, JANUARY 23, 1950

## It Didn't Work Then, And It Never Will

WHEN the Pilgrims established their new home in Massachusetts, they set up a Communist community at first. Everybody worked for the community, and their produce was divided equally in America's first rationing program.

But it didn't work out. Harvests were poor, and the Pilgrims complained that they were too hungry and weak to work hard.

"So as it well appeared," Governor Bradford set down in his diary, "that famine must still insue the next year allso, if not some way prevent."

The Pilgrims, he noted, "begane to thinke how they might raise as much corne as they could, and obtaine a beter crope than they had done, that they might not still thus languish in miserie."

At length (in the year 1623) "after much debate of things, the Gov. (with the advise of the cheefest amongst them) gave way that they should set corne every man for his owne perticuler, and in that regard trust to them selves. . . . And so assigned to every family a parcell of land. . . .

"This had very good success; for it made all hands very industrious, so as much more corne was planted than other waise would have bene by any means the Gov. or any other could use, and saved him a great deall of trouble, and gave farr better contente.

"The women now wente willingly into the feild, and tooke their litle-ones with them to set corne, which before would aledg weakness, and inability; whom to have compelled would have bene thought great tiranie and oppression.

"The experience that was had in this commone course and condition, tried sundrie years, and that amongst godly and sober men, may well evince the vanitie of that conceite of Platos and other ancients, applauded by some of later times— that the taking away of propertie, and bringing in communitie into a commone wealth, would make them happy and flourishing; as if they were wiser than God. For this communitie (so farr as it was) was found to breed much confusion and discontent, and retard much employment that would have been to their benefite and comforte.

"For the yong-men that were most able and fitte for labour and service did repine that they should spend their time and streingth to worke for other mens wives and children, with out any recompense. The strong, or man of parts, had no more devission of victails and cloaths, than he that was weake and not able to doe a quarter the other could; this was thought injustice. . . .

"And for men's wives to be commanded to doe servise for other men, as dressing their meate, washing their cloaths, etc., they deemed it a kind of slaverie, neither could many husbands well brooke it. . . .

"By this time harvest was come, and instead of famine, now God gave them plentie, and the face of things was changed, to the rejoysing of the harts of many, for which they blessed God. And the effect of their particuler (private) planting was well seene, for all had, one way and other, pretty well to bring the year aboute, and some of the abler sorte and more industrious had to spare, and sell to others, so as any generall wante or famine hath not been amongst them since to this day."



## Q. What Is Proper Method To Provide, Control Humidity In High-Low Temperature Box?

William J. Schank  
367 Washington Place  
Englewood, N. J.

Dear Mr. LaSalvia:

I would like to obtain whatever information and data you may give me or advise where I may obtain same, about installing a humidity system to be used in a low and high temperature testing box for electronic materials.

Humidity is to be added to the high temperature cycle of this box. At present the box is being used for temperature range from -67° F. to 140° F.

What I want to know is the method of creating and controlling humidity; also the hookup and wiring diagram of same.

WILLIAM J. SCHANK

## A. Type, Location of Humidity Controls Depend Upon Design of Entire Refrigeration System

Dear Mr. Schank:

Your letter is very vague as to the description of the present box which is being used for temperature range of -67° F. to 140° F. and to which you want to add humidity at the high temperatures. It would have helped immensely if the following information was given:

a. Length, width, and height of box or room.

b. How the box is constructed.

c. Some description of type of refrigeration equipment which is at present in operation, including size of compressor and size of air handling unit.

d. What relative humidity is required and at what room temperatures.

Knowing this information would have been easier to help solve this particular problem and because this information is lacking, I will give a few methods which may be applied to the present system.

Providing humidity control for this type of system is not as easy as one thinks. No one can describe exactly what is required, because it must be tailor made for each installation. In other words, the humidity control design depends upon the design of the whole system. Not knowing what type of system has been installed, I can only give general information of methods that can be provided.

This information cannot be gotten out of any book. Although all books on air conditioning usually carry something on humidification. It takes many years of experience for an individual to come up with a proper answer to such a problem. But in order to apply humidification it is necessary to know some of the fundamentals to do a proper performance.

There are two general methods of applying humidification to any space:

(1) Where the humidifier is in the room itself and is controlled by a humidistat in the room, controlling a water solenoid valve in the water line to the humidifier.

(2) Where the humidifier is in the air handling unit and the moisture is conveyed to the room by ductwork or discharged through the unit when no ductwork is used.

In both cases the moisture is conveyed to the space by the air stream. There are two controls which can be applied to this method: (a) by installing the humidistat in the space and (b) where the humidistat is installed in the recirculating duct. In both cases the humidistat controls the water solenoid valve in the water line to the humidifier.

In general practice when an air-handling unit is used and the relative humidity in the space is to be 85% or greater, the humidifier should be in the space proper. When the relative humidity to be carried in the space is less than 85% then the humidifier is placed in the air handling unit.

Also, when the relative humidity in the space is to be maintained at less than 30%, the regular city water can be used. When the relative humidity of 30 to 50% is to be maintained, regular city water may be used but better results can be obtained by using warm water, as from a hot water heater.

When higher than 50% is to be maintained, hot water should be used entirely. In some cases where higher than 50% is to be maintained it may be advisable to use low pressure steam for humidification. In such cases steam at no higher than 2-oz. pressure per square inch should be used, and the steam should also be free of oil contamination, otherwise it will give an offensive odor.

In all cases where water is used,

the spray nozzle must break up the water into a very fine mist, in order that it may be properly diffused with the surrounding air. Otherwise moisture may be entrained in the air in the form of droplets and finally deposit on floor and walls and produce wet spots, which should not occur.

Of course, when higher than 85% relative humidity is carried such wet spots will occur and there is nothing that can be done about it. In such cases gutters are provided at floors and window sills to catch the excess water and take it out of the space.

In order to clarify this still further, I have made a sketch of a very low and very high temperature room which I would install under such conditions as your problem and be able to maintain -67° F. and up to 140° F. temperature with any given relative humidity; that is, with this design, any temperature between the two extremes with any relative humidity permissible at that temperature can be maintained very closely. Also that temperature changes in the space can be accomplished in a very short time.

The design of the structure is a room within a room. The inner room to be cooled to the required temperature by refrigeration in the outer room. An air handling unit consisting of fan, heating coil, and spray humidifier reheats the inner room, if it is cooled below temperature setting and supplies humidity in the room up to 85% relative humidity on higher temperatures.

If the relative humidity to be maintained on higher temperatures is above 85% the humidifier in the air handling unit is kept off and the spray humidifier in the room proper is placed in operation.

The operation would be as follows:

(1) When temperature in the space is -67° F., the compressor would operate to maintain about -75° in the outer room. When the temperature in the inner room falls below -67° F. the thermostat in the inner room will reheat by opening the automatic steam valve on the steam line to the heating coil. When the temperature in the inner room goes above -67° F. the thermostat will shut off and reheat. The reheat comes into operation whenever the inner room temperature falls below the setting of the thermostat. This will apply for any setting when refrigeration is used to cool the room.

(2) Under all conditions when the inner room is to be maintained below 40° F. the humidifier is kept from operating. Air up to 40° F. is usually from 50 to 100% relative humidity. Also in this range there is danger of moisture freezing in the room.

(3) On temperatures above 40° F. the humidifier can be placed into operation to meet the relative humidity permissible by controlling the spray humidifier in the air handling unit.

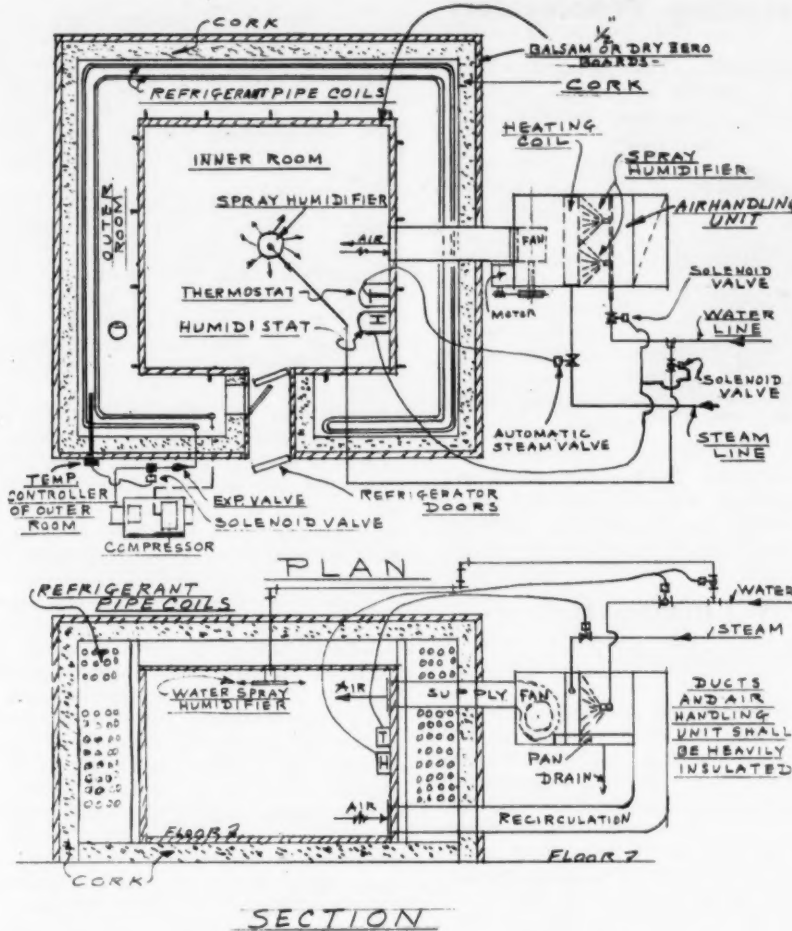
(4) When settings above 40° F. temperatures are required with relative humidities above 85% it is necessary to cut out the humidifier in the air handling unit and operate the spray humidifier in the room proper.

Of course, the amount of water to be sprayed depends entirely on the outside conditions surrounding the double room and also the conditions to be carried in the inner room. This has to be calculated.

Wiring diagrams are also subject to the type of system employed and there is no specific diagram which can be used at all times. I would advise that when a humidity control has been worked out on a system, to call a temperature control agent of a reputable company and work out with him the wiring diagram that is required.

JAMES J. LASALVIA

## Room-Within-Room Layout Permits Broad Temperature, Humidity Range



## Detroit Contractor Gets New Name for Company

DEARBORN, Mich.—Change in name and location of John J. Kramer & Associates, representing four major lines of air conditioning and heat transfer equipment, has been announced by John J. Kramer, who heads the firm.

Formerly known as Kramer-Muir & Associates, the firm is now located at 5051 Argyle here, and represents the following:

Nevinger Mfg. Co. of Greenville, Ill., packaged air conditioners; Richard M. Armstrong Co., West Chester, Pa., water chillers, shell-and-tube condensers, other heat transfer equipment; Schnacke, Inc., Evansville, Ind., compressors and condensing units; and Baltimore Aircoil, Baltimore, Md., heavy-duty evaporative condensers.

Kramer was formerly vice president of American Thermal Industries, and before that was design and application engineer with American Blower Corp.

## Bruton-Spivey Chartered To Sell Equipment In N. C.

FAYETTEVILLE, N. C.—Bruton-Spivey, Inc. here, has obtained a charter from the Secretary of State to deal in air conditioning and refrigerating equipment. Authorized capital stock is \$100,000, with \$700 stock subscribed by Eugene and Halma Bruton, both of Fayetteville, and W. P. Spivey, of Wrightsville Beach.

## TYPHOON

Rounds Out the Quick Profit Range of Packaged Air Conditioners—

with the NEW 15 and 20-TON UNITS

Side view of unit showing fan section assembled for horizontal discharge.

- "Central plant" performance with packaged unit economy.
- The fan section is adjustable so that it can be used for horizontal or vertical discharge. This feature, combined with convenient filter section, makes easy the connection to a duct system.
- Superbly built super-powerful new models—completely packaged, factory-assembled and tested.

NOW

1½ to 20 Ton Air Conditioning Units plus evaporative condensers—compressors—low side units.



Over 40 Years' Experience  
Serving America's  
Air Conditioning Needs

Tie Up with Typhoon . . . our district sales managers will give you complete information. Write today.

**TYPHOON AIR CONDITIONING CO., INC.**

794 UNION STREET • BROOKLYN 15, N. Y.



## Central Service Supply Opens New Warehouse On 13th Anniversary

SCRANTON, Pa.—Formal opening of the new warehouse of the Central Service Supply at 918 N. Washington Ave. here will be held on Jan. 25, on the thirteenth anniversary of the founding of the company, Theodore I. Glou, president, announced recently.

Central Service Supply was founded on Jan. 25, 1937 at 209 Jefferson Ave. At that time the company occupied a floor space of approximately 1,200 sq. ft. As time went along additional space at 211 Jefferson Ave. was taken to furnish additional facilities.

In September of 1949 ground was opened at 409 E. Jefferson St., Syracuse, N. Y. occupying approximately 1,500 sq. ft. Subsequently larger quarters were secured at 516 E. Erie Blvd., in Syracuse and on Feb. 12, 1947, the company moved into its own home at 647 S. Warren St.

In September or 1949 ground was broken at 918 N. Washington Ave. for the new Scranton home. The company now occupies approximately 10,000 sq. ft. of floor space devoted to the sales of refrigeration parts and supplies.

In the new Scranton home approximately 3,000 sq. ft. of parking space is provided at the rear of the store.

Other executives of the company are R. L. Glou, secretary; Ray Conradt, manager of the Syracuse branch; J. C. Glou, manager of the Scranton branch; and Frank Wren, office manager at Scranton.

## Buel A. Devine Will Represent Wolverine Contacting Wholesalers

DETROIT—The appointment of Buel A. Devine as jobbers field representative has been announced by the Wolverine Tube division of the Calumet & Hecla Consolidated Copper Co.



Devine will work directly with the Wolverine sales force and among wholesalers, architects, contractors, and public works people.

## DFN Catalog R-8 Now Available

NEWARK, N. J.—McIntire Connector Co., 265 Jefferson St., Newark 5, N. J., has just published its new Catalog R-8, showing dimensions, ratings, and parts on the latest line of DFN refrigeration driers, filters, strainers, moisture indicators, moisture control units, and large tonnage driers up to 100-ton capacity.

Copies may be obtained from wholesalers of DFN products or else by writing directly to the manufacturer.

## 60 Door Openings Start Defrost Cycle on Westinghouse Model; Electric Heater Warms Refrigerant To Melt Ice on Evaporator

MANSFIELD, Ohio—Details of its new automatic defrosting system which Westinghouse Electric Corp. introduced on one of its 1950 household refrigerators (Model ADA 96) have been released by the manufacturer.

The system, which incorporates an electric heater to warm refrigerant in the capillary tube, is based on the assumption that the door of the average refrigerator is opened 60 times a day. The number of door openings is counted mechanically, and the 60th opening starts the defrost cycle.

As shown on the accompanying schematic diagram, when the refrigerator is operating normally, and the defroster not working, the compressor pumps the "Freon" refrigerant and discharges it into the condenser as a high pressure gas, Westinghouse explains.

Here it is condensed by the surrounding air and leaves the condenser as a high pressure, high temperature liquid. This liquid passes through the capillary tube, through the kidney-shaped tube near the heater, spills into the small 4-in. high storage tank, and overflows through the opening in the inverted U-tube.

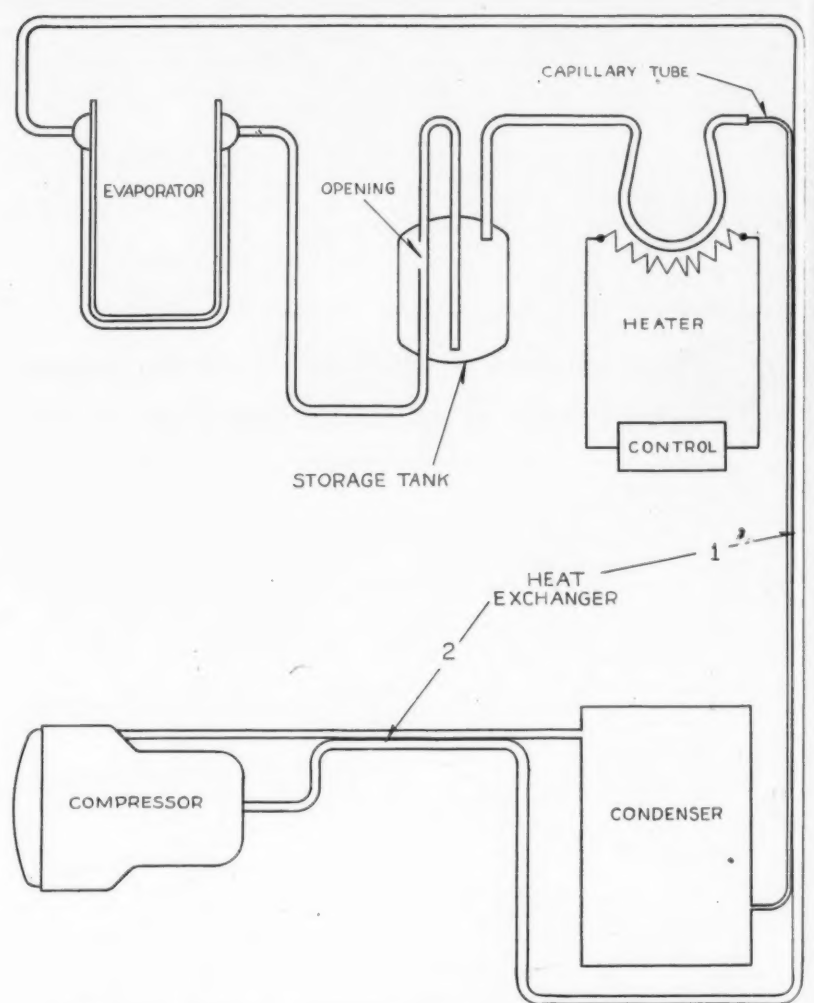
The liquid evaporates into a gas in the evaporator and cools the surrounding air in the process. This cool gas refrigerant from the evaporator passes through heat exchanger No. 2. There it is warmed a bit by the vapor leaving the compressor, and then it returns to the suction side of the compressor to start the process all over again.

When the automatic defrost is activated, liquid refrigerant from the capillary tube is warmed and vaporized by the external heating element. This gas starts flowing through the storage tank to the evaporator where it melts the accumulated frost and ice.

The small opening in the U-tube cannot pass all the refrigerant vapor, however. So pressure in the tank builds up and forces the liquid in the tank to overflow to the evaporator. This clears another path for the warm refrigerant vapor to reach the evaporator and aid in defrosting.

Since the evaporator is normally flooded with the liquid refrigerant, the liquid from the tank overflows from the evaporator into the suction line. At heat exchanger No. 2 it comes in contact with the higher temperature vapor discharging from the compressor. This raises the low side pressure and prevents the liquid refrigerant in the evaporator from evaporating. All of the cooling effect now takes place in this No. 2 heat exchanger.

The entire process is rapid mainly because the heater warms the refrigerant so quickly, according to Westinghouse.



Schematic diagram of Westinghouse automatic defrost system.

## RSES Will Move Its Educational Office No. Ohio ASHVE Hears Andrus On Lake Erie Influences

MILWAUKEE—Educational office of the Refrigeration Service Engineers Society, under the direction of Paul B. Reed, will be moved to 1721 E. Lake Bluff Blvd., Milwaukee 11, as of Feb. 1, the society has announced.

Improved working facilities will be offered by the new location, RSES said.

CLEVELAND—The Northern Ohio Chapter of the American Society of Heating and Ventilating Engineers held its January meeting at the Cleveland Engineering Societies Bldg. with Weatherman C. G. Andrus as guest speaker.

Andrus discussed how Lake Erie influences the weather of various communities along the south shore.

## 10,000 SODA FOUNTAINS

HAVE HIGH SANITATION AND  
LOW MAINTENANCE EXPENSE  
With **HEAT-X CAST ALUMINUM  
LIQUID COOLERS WITH  
TWO BEVERAGE COILS**



● SANITATION is really achieved with the HEAT-X CAST ALUMINUM LIQUID COOLER. It requires relatively little space and brings complete protection against freeze-up damage. Separate coils for refrigerant and beverages are cast in the aluminum block. Specified and used by dozens of leading soda fountain manufacturers, its fast cooling and trouble-free operation has already brought economy and pleasure to over 10,000 fountain owners.

**THE HEAT-X-CHANGER CO., INC.**  
415 Lexington Avenue, New York 17, N. Y. Brewster, N. Y.

## VIRGINIA MAKES FINE REFRIGERANTS

DON'T FORGET  
**"V-METH-L"**  
Methyl Chloride

AND  
**"EXTRA-  
DRY  
ESOTOO"**  
Liquid Sulfur Dioxide

THEY'RE

consistently pure  
consistently sure

50 YEARS OF SERVICE TO INDUSTRY

**VIRGINIA Refrigerants**

West Norfolk • New York • Boston • Detroit

VIRGINIA SMELTING COMPANY, WEST NORFOLK, VA.

Distributors for Kinetic's "Freon" Refrigerants  
AVAILABLE FROM WHOLESALERS COAST TO COAST

## Cheyenne Firm Incorporates

CHEYENNE, Wyo.—The Automatic Electric Co. here, which features the Hotpoint line of appliances, has filed articles of incorporation with the Wyoming secretary of state, listing \$25,000 in capital stock. Five directors named are C. H. Simpson, J. A. Simpson, Paul D. Fintus, William L. Heath, and Frank M. Gallivan.

LOOK!... **Paragon**  
DEFROSTING TIME SWITCHES  
NOW AT LOWEST NET PRICES!

SERIES 300-M  
ONLY \$17.00 LIST

FOR ALL TYPES OF  
COMMERCIAL REFRIG-  
ERATOR DEFROSTING:

Electric Heat • Hot Gas  
or Compression Shutdown  
for UNIT COOLERS • FROZEN FOOD  
DISPLAY CABINETS • REACH-IN  
CABINETS • WALK-IN BOXES • LOCKER  
PLANTS • FUR STORAGE VAULTS

See your jobber or write for free  
bulletins and installation data.

**Paragon ELECTRIC COMPANY**  
1687 12th STREET • TWO RIVERS, WIS.

America's Foremost exclusive  
manufacturer of Time Con-  
trol Switches for all uses,  
including "de-frost-it" for  
domestic refrigerators, only



\$9.95



## Webb Named District Mgr. for Lehigh Mfg. In West-South Area

LANCASTER, Pa.—Lehigh Mfg. Co., maker of Lehigh Blu-Cold condensing unit, has announced the appointment of Clyde L. Webb as district manager in the territory including Colorado, New Mexico, Oklahoma, Texas, Louisiana, Arkansas, Mississippi, and Memphis only, in Tennessee.



In addition to representing Lehigh in this area, Webb also represents the Betz Corp. Webb will make his headquarters at 4336 El Campo Ave., Fort Worth, Tex.

## Use of Milk Coolers Rises As More Nebraska Farmers Stress Grade 'A' Output

LINCOLN, Neb.—On Jan. 1, 1950, there were 350 farms supplying milk to this city that had the refrigeration equipment and other sanitary facilities needed to meet Grade A standards, according to Dr. Fred Long, director of the Lincoln-Lancaster county health department.

Dr. Long pointed out that the city passed a Grade A milk ordinance back in 1942 when only 12 farms qualified and has been working ever since to bring all milk and milk products except ice cream, butter, and cottage cheese, up to that quality.

Dairy interests have spent more than \$500,000 in processing equipment and on farms to help the farmers meet Grade A standards, Dr. Long stated. The farmers themselves have spent hundreds of thousands of dollars for mechanical coolers, milking machines, vats, and similar equipment, he added.

## New Distributor Named

DULUTH, Minn.—The Appliance Distributing Co. of Columbus, Ohio, which has been a leading distributor of major appliances and radios in central Ohio for 20 years, will distribute Coolerator products in a 29-county area in central and southeastern Ohio, the Coolerator Co. announced recently.

The firm also distributes complete lines of home laundry equipment and radio and television.

## Ship Air Conditioning Installation of More Zone-Controlled Systems Aboard Ship Seen Boon to Travel Market

MILWAUKEE—The installation of automatic temperature and air conditioning controls on virtually all classes of ships will soon be standard practice, according to Johnson Service Co. here, a pioneer in the development and manufacture of control systems for public and institutional buildings and industrial plants.

Johnson Vice President M. F. Rather, in charge of eastern district and export operations in New York, recalls that a few installations were made prior to 1941 on passenger liners operating between the United States and Europe, but it was under the impetus of war that the use of automatic temperature control aboard ship became really widespread.

In cargo and supply ships, especially those carrying perishable goods and operating for extended periods under adverse climate conditions, the need for extensive installations of automatic temperature and humidity control equipment became apparent. Similar need was recognized for transports, all types of navy craft, and hospital ships.

Rather noted that architects and engineers of passenger ships "have found that supplying travelers with the same selective air conditioned comfort at sea as ashore gives a definite advantage in the highly competitive travel market."

The latest luxury liner to provide this ultimate in comfort for her passengers is the *Ile de France*, queen of the French Line fleet, which returned to service this summer after \$25 million worth of facelifting and general refurbishing. The temperature regulation system was installed by Johnson's agents, Etablissements Neu, in Paris and Lille, France.

Each of the *Ile's* deluxe cabins is equipped with Johnson individual, automatic temperature control through a Johnson thermostat which measures the temperature in each room. The theater and the dining rooms are served by central air conditioning systems and these are also provided with comprehensive Johnson control equipment.

Staterooms and other occupied areas of the ship are divided into several zones. Each zone is supplied with outdoor air from one of the central fan systems. In general, the staterooms are divided into zones according to exposure, while the theater, each dining room, the Cafe de Paris, the main lounge, and afternoon cocktail salon each constitutes a separate zone in itself. Each zone is thermostatically controlled in the same manner as individual rooms.

The central fan systems take in outdoor air and, depending upon the outdoor temperature, heat or cool it

for passenger comfort. The central fan systems are completely and individually controlled, so that outdoor air of the proper amount, and of the correct temperature and moisture content, can be supplied to each zone, regardless of the requirements of the other zones, according to Johnson.

Pre-conditioned air from the central fan systems is supplied to these units through concealed ductwork. Air is discharged into the stateroom through a grille in the top of each room conditioner, while another grille, behind which a heating coil is located, permits air from the stateroom to return to the unit.

Pre-conditioned outdoor air from a central fan enters the room unit, induces a flow of air from the room through the return grille and heating coil, after which it is mixed with the incoming outdoor air and the mixture is discharged into the room.

About three volumes of room air are re-circulated for each volume of pre-conditioned outdoor air supplied to the unit, the outdoor air being cold enough to supply all of the cooling needed on the warmest day, it was pointed out. Hot water is supplied to the heating coil, in the path of the return air, through a Johnson regulating valve which is under the control of a room thermostat.

Whenever all of the cooling is not required, this thermostat causes heat to be added to the return air, thus raising the temperature of the mixture before it goes to the room.

## Detroit Air Conditioning Institute Occupies New Site

DETROIT—The Detroit Air Conditioning Institute, formerly at 4125 Grand River Ave., has moved to 4258 Woodward Ave., George H. Clark, director of the institute, announced.

The move was necessitated because of insufficient space in the old location, Clark said. The new address is a modern, fireproof building occupying an area of 10,000 sq. ft.

Equipment and facilities have been expanded with the area in order to take care of the growing enrollment, he stated. The training offered is of an engineering type stressing fundamentals.

## Worthington Names Lewis As Assistant Comptroller

HARRISON, N. J.—The appointment of Harry E. Lewis as assistant comptroller was announced by Worthington Pump & Machinery Corp. Lewis succeeds Joseph A. Schallenberg who died Dec. 16, 1949.

Lewis joined the corporation in 1924 and served in various capacities in the comptroller's office until 1942 when he was appointed works comptroller of the Wellsville Works.

In 1948 he was promoted to works comptroller at Holyoke, a position he held until his recent transfer to Harrison.

## Penn Electric Office Moves

GOSHEN, Ind.—The Cleveland district office of the Penn Electric Switch Co. has been moved to 728 Film Exchange building, Cleveland.

## Baker's Export Offices Shifting to New York for Closer Customer Contact

SOUTH WINDHAM, Me.—Moving of the general export offices of the Baker Refrigeration Corp. to newly acquired space at 103 Park Ave., New York City, effective immediately was announced recently by Frederick W. Smith, Baker's newly elected vice president in charge of sales.

This re-location will enable the Baker export department to keep in closer contact with its foreign distributors and forwarding companies who are located in New York City.

The Baker export department, for many years located at Omaha, Neb., and more recently at the main offices of the company here, is under the direction of Lillian Keiser who has served in this capacity several years.

The export office will be equipped to act as New York City headquarters for representatives of the company, and will offer facilities for distributors and customers located in the metropolitan area or visiting New York, to go over Baker's entire line of air conditioning and refrigeration equipment.

## Mich. Distributor for Admiral

LANSING, Mich.—The Major Appliance Co. has been appointed distributor of Admiral products in central and northern Michigan, according to J. Gower Chapman, vice president and general manager. The firm now distributes Duo-Therm, Youngstown, Hardwick, and Whirlpool appliances.

SEE THE MOST COMPLETE LINE  
OF ROOM AIR CONDITIONERS

by  
**Remington**

in Booth No. 265

at the A. S. H. & V. E. show  
in Dallas, January 23-27

CONSOLES • WINDOW UNITS  
AIR COOLED • WATER COOLED  
REMOTE INSTALLATION UNITS  
MODELS FOR AC OR DC

New MODELS THAT HEAT  
AS WELL AS COOL

New ROOM VENTILATORS

More than ever, REMINGTON this year has the most complete line! Remington dealers won't miss a single sale for lack of the right unit for every job.

They'll make more sales the year around with new Remington units that heat as well as cool, and the new Remington room ventilator.

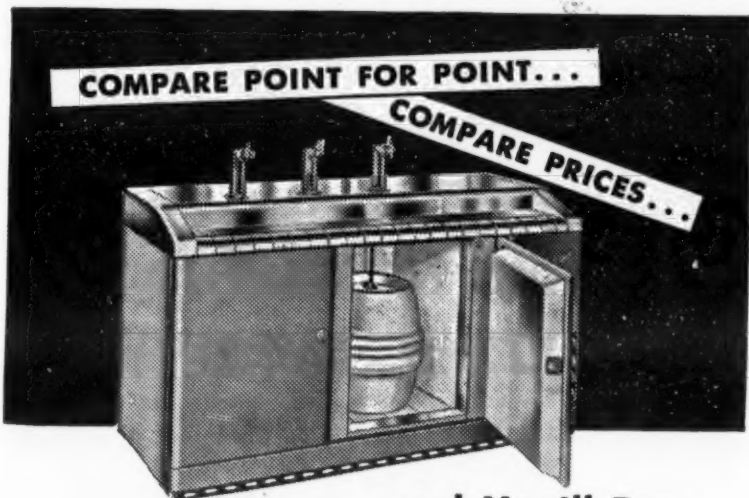
Distributors! Remington has several highly desirable areas open for aggressive distributors. See us in Dallas during the Show or write today for details.

### New ROOM VENTILATOR

Instantly adjustable to bring in filtered, outside air; to exhaust stale or smoky air from the room; or to filter and recirculate room air. Quiet, efficient, economical in first cost and operation. Adjustable air volume; weatherproof.

COMPARE POINT FOR POINT...

COMPARE PRICES...



...and You'll Buy



**Koolmaster**  
KEG COOLER & BEER DISPENSER

The stainless steel top of the Koolmaster contrasts most attractively with the soft brown Dulux long-wearing baked enamel body finish. Other Koolmaster features include:

- New all steel construction throughout.
- New chrome "push-button" door latches.
- "Engineered Cooling," (constant-even-temperature)
- New full length concealed door hinges.
- New five-year warranty plan.
- All stainless steel exterior. (slightly higher price)

Two sizes, two-keg and three-keg sizes are designed with self-contained refrigerating units or for remote installation.

For Complete Information Write or Phone

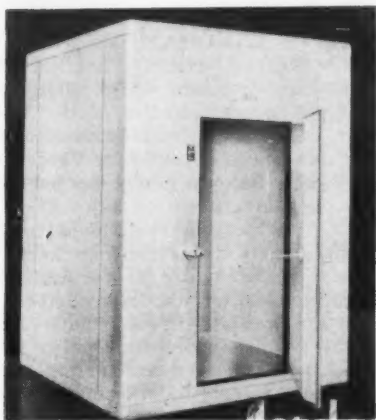
**UNITED REFRIGERATOR COMPANY**  
HUDSON, WISCONSIN

**REMINGTON AIR CONDITIONING**

DIVISION OF REMINGTON CORPORATION  
CORTLAND, N. Y. CABLES — REMINGAIR



## What's New



### Two Men Can Erect New Jordon Sectional Walk-Ins

PHILADELPHIA—The Jordon Refrigerator Co. has put into volume production several models of sectional walk-in coolers for both high and low-temperature use, the company announced recently.

Normal temperature models are insulated with 4 in. of Fibreglas insulation fully wrapped and vapor sealed in refrigeration sheathing, and zero temperature models with 6 in. of Fibreglas insulation with similar low-temperature vapor sealing.

Standard heights are 6½ ft. and 8 ft. with standard wall, door, ceiling, and floor sections measuring 3 ft. 10 in. Corner posts with full radius corners are used, and all sections are attached to each other with lag bolt pod assemblies. This makes it possible for only two men to erect the entire cooler with a wrench.

Kiln dried tongue and groove framing lumber with heavy gasket attached assures a thorough vaporproof seal. Only a minimum amount of wood is used in the construction, reducing over-all weight and increasing the use of insulating materials, it was indicated.

Precision made walk-in cooler sections are fabricated of galvanized metal interiors and natural polished aluminum exteriors.

A wide variety of shelving and

rails is available. All Jordon walk-in coolers are shipped complete with walk-in doors and interior light (in fogproof protective glass cover) with exterior switch and pilot light installed on a standard wall section. Solid or glass insert reach-in doors are available for all size coolers.

The normal temperature models have a self-contained refrigeration system consisting of compressor unit, matched blower, and all necessary components mounted on a standard size wall panel. The entire system is installed and tested at the factory and cuts down, by 50% or more, the time required to erect and install the cooler.

All that is required is normal checking and plugging into proper electrical outlet.

Freezer models in the Jordon walk-in line are equipped with the Kramer "Thermobank" with installation being required in the field.

Both 6½-ft. and 8-ft. high models are available in 6-ft. and 9-ft. 10-in. widths and varying lengths beginning with 6 ft. up to 25 ft. 2 in. or longer.

### Aluminum Paint Spray Can Operates by Push-Button

EVANSTON, Ill.—A self-spraying container has been adapted for use with Spray-Brite aluminum enamel for refinishing compressors and motors, Graymills Corp. located at 2006 Ridge Ave. here, announced recently.

"Just press the button of the pressure packed Spray-Brite container and fine aluminum enamel sprays on like magic," the manufacturer declared.

"Constant pressure is maintained by liquid 'Freon' operating on the principle of the insecticide bombs.

"The can is easily carried with service and repair tools and is always ready to use by merely pressing the valve button," the manufacturer explained. "One can of Spray-Brite covers 75 to 150 sq. ft. Retail price is \$1.59 per can (a little higher in the west)."



### Humidifier Washes Air In 'Circular Waterfall'

CHICAGO—The new model 600 humidifier recently introduced by Fresh'nd-Aire Co. here uses a "waterfall" action to filter, wash, and moisturize the air in homes and offices.

"In the unit, a compact electric motor drives both a fan blade and a circulating pump," the company explained. "Water from the 3-gal. reservoir in the base of the humidifier is pumped to the top of the unit and forced through a water distributing ring.

"The water then streams out through a fibrous filter, thereby creating what is, in effect, a circular waterfall. It is through this curtain of falling water that air is drawn by the motion of the fan.

"As air is drawn through the waterfall, all dust, dirt, pollen, smoke, and other impurities are washed and filtered out, and the air, as it emerges from the top of the unit, is crystal clear and properly humidified."

The unit is said to disperse 13,000 cu. ft. of air an hour. The pump forces a continuous stream of water down through the filter at the rate of 60 gals. per hour.

The company pointed out that the model also acts as a room deodorizer, actually removing objectionable odors from the air.

The unit has a retail price of \$59.50.

### Stand Adapts Portable Welder for Stationary Use

BROOKLYN—A new lightweight steel stand designed to further increase the versatility of its recently-marketed portable and self-operating spot-welder is now being introduced by Greyhound A.C. Arc Welder Corp., 606 Johnson Ave., Brooklyn 6, N. Y.

When mounted on the stand, foot-lever operation frees the operator's hands and the Greyhound portable spot-welder becomes an "easy to use and efficient stationary model," according to the manufacturer. The unit can again be used as a portable device by simply removing the two metal brackets holding the spot-welder to the stand.

The stand and portable spot-welder is described as "ideal for plants which cannot afford a large stationary model." It also is said to answer a need for a combination portable-stationary spot-welder in factories and shops which do not have 220 volts.

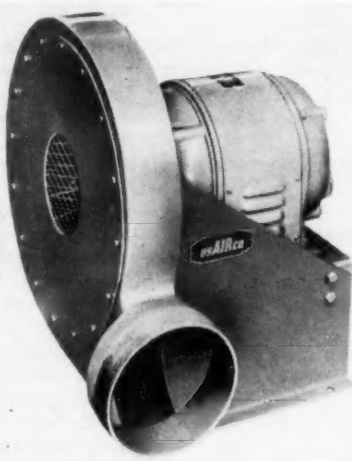
However, the Greyhound welding tool is available in both 110 and 220 volts A. C. models 50-60 cycles.



Moreover, the device is said to weld up to ½-in. combined thickness of metal, including stainless steel and mild steel, as well as up to two pieces of 18-gauge galvanized.

The stand is 36 in. high, 15 in. long, and 8½ in. wide. It weighs approximately 16½ lbs.

### UsAirco Adds Line of Turbo Coolers, Gas Boosters



on big boilers, drying systems involving high resistance, vaporizing systems, and certain shipboard uses.

Gas booster uses include applications for supply and distribution of gas, boosting pressures from pipe lines in all industries using gas, boosting pressure at burners, and in connection with industrial gas ovens and heat-treating furnaces. Conversion boiler manufacturers also use them as a component of their equipment.

UsAirco turbo blowers are single-stage units for low pressures. Multi-stage units are available for pressures above 24 ounces. All sizes operate at 3,450 r.p.m. to reduce the number of stages and housing sizing to a minimum.

V-Belt drive types are available for larger units and for other than 60-cycle current. Standard large size pillow blocks with double row, self-aligning ball bearings are used. All drives are multiple V-belt type with high load factor. Sparkproof, corrosion resistant aluminum impellers are standard.

Gas boosters are special exhausters, fitted on the drive size with a gas-tight, high-speed, oil lubricated rotary seal through which the drive shaft enters to carry the impeller.

MINNEAPOLIS—Turbo blowers and gas boosters have been added to the products of United States Air Conditioning Corp., L. P. Hanson, vice president in charge of sales, announced today.

Turbo blowers are used for highly specialized applications by manufacturers of commercial and industrial stokers, heat-treating furnaces, oil burners, industrial ovens, rock wool furnaces, fly-ash re-injection systems

IT'S HERE!

The New **SUPER-MITE** CARBONATOR by Everfresh



MODEL RC 50

Here, ready to bring new profits to you and better beverages to your customers is the revolutionary Everfresh Super-Mite Carbonator. The newest addition to the famous Everfresh line of Soda Fountains, Carbonating Equipment and Drink Dispensers.

The Super-Mite is a complete carbonating unit so small and so light it can be installed in any convenient location; yet large enough and powerful enough to reliably supply fifty gallons of high volume carbonated water every hour.

Fully automatic, the Super-Mite is ruggedly constructed to give years of trouble-free service.

ORDER DIRECT OR WRITE FOR ADDITIONAL INFORMATION TODAY

**ANDERSON & WAGNER INC.**

8701 South Mettler Street • Los Angeles 3, Calif.

- 50 gallons per hour capacity
- Only 14" x 17" x 13" high
- Weighs only 65 pounds
- Diaphragm type pump
- Easy to install

Dealer Net Price ONLY **\$125.00**

F.O.B. Los Angeles Complete with gas gauge and regulator.



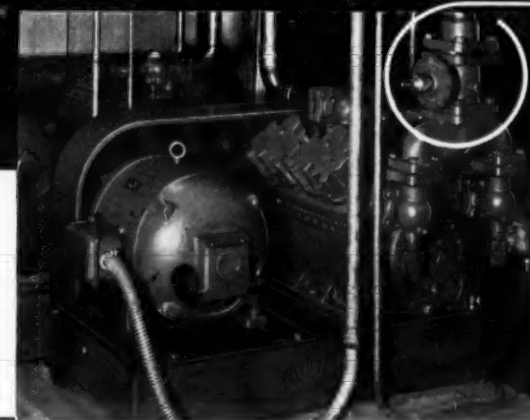
### Hot Dog Cooker Starts With Closing of Cover

HAZEL PARK, Mich.—An electric waterless hot dog cooker, called the Spe-de Wee-ne, that is designed to cook from one to three wieners at one time in two minutes or less, has been introduced by the Ambory Corp., 21325 Stephenson Highway, here.

The company said that the cooker begins to operate as soon as the cover is closed and timing should begin at that time. It pointed out that as a safety feature, no contact can be made unless the cover is closed.



### SCHNACKE COMPRESSORS AND CONDENSING UNITS with THERMATROL



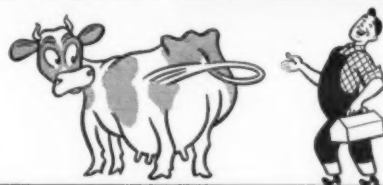
- maintains EVEN Evaporator Temperature

Thermatrol is the most efficient, least expensive and simplest type of capacity control available. Reduces in a gradual curve—not in steps, and eliminates unnecessary cycling.

Schnacke advance engineered compressors feature refrigerant cooled, replaceable cylinder sleeves, balanced forged crankshafts, positive forced feed lubrication, efficient suction and discharge valves, insert automotive type bearings, etc. High efficiency and trouble-free operation with little vibration assure satisfaction. Thousands of discriminating engineers and users the world over are convinced of Schnacke quality through proven performance.

Schnacke Compressor Units range from 5 H.P. to 50 H.P. and Condensing Units from 5 H.P. to 25 H.P. Write for further information.

1016 E. COLUMBIA ST. **SCHNACKE, INC.** EVANSVILLE, IND.



"She's making sure it's kept correctly cooled with Ranco Controls"

### Ranco Type O-1414 Control for Milk Coolers

To insure complete customer satisfaction on every control replacement job, replace it right with Ranco Refrigeration Controls. You'll do the job easier, faster . . . make greater profits, eliminate call-backs. Select from the most complete line ever supplied to the trade. See your Ranco wholesaler today.

**Ranco Inc.** COLUMBUS 1, OHIO



Replace it right with Ranco

World's Largest Manufacturers of Refrigeration Controls . . . more than 20,000,000 controls now in use



# What's New (Con't)

## Makes Ice from Fresh or Salt Water



OAKLAND, Calif.—An instant ice machine that makes crushed ice from fresh or salt water is being manufactured by the Liquid Freeze Corp., 1133 24th St., Oakland 7.

Ice is formed by freezing a spray of water over the outer surface of a refrigerant chilled drum. A set of vertical ice remover blades, attached to the revolving water distribution head, shred the ice off of the cylinder into a collector pan where the wafer-thin pieces are stored for use.

The model SC 249, a self-contained unit, is said to make one ton of ice every 24 hours, providing inlet water does not exceed 65° F. The machine is also constructed for remote installation.

The model SC 249 is 36 in. wide, 24 in. deep, and 69 in. high. It is powered by a two-cylinder heavy duty compressor with motor and water-cooled condenser mounted on the base of the unit.

The evaporator is a stationary, vertical, hollow stainless steel cylinder. The interior of the cylinder forms a full-flooded evaporator chamber. Hollow center tube forms the return passage for evaporated gas.

Liquid refrigerant is admitted to

the evaporator chamber through the cylinder base. No refrigerant seals are required, according to the manufacturer. Refrigerant is taken to, and brought from the evaporator through stationary, continuous piping.

Specially designed ice removing blades are mounted on a vertical steel bar attached to the revolving water distribution head and follow 25° behind the revolving water curtain.

Blades fracture the ice sheet and remove the ice from the freezing surface by lifting action. By following 25° behind the water curtain, the ice is super-cooled and dry before action by the blades, thus the natural action of ice to expand when frozen is utilized and the clean removal of ice is accomplished with a minimum of effort and wear by the blades, the manufacturer declared.

The make-up water tank is of cast aluminum. The water level is controlled by a float valve. The tank is sealed against contamination.

The ice chute is cast integrally with the ice collector pan. Rotating collector grids provide positive mechanical delivery of ice.

The condensing unit motor is of 3-hp. capacity, 3-phase, 220-volt, a.c. A magnetic starter with overload heater coils mounted inside the cabinet protects the motor against overload. The push button starter is flush mounted in the case.

The complete unit has a net weight of approximately 1,000 lbs. Shipping weight is about 1,250 lbs.

The manufacturer sees the unit as having value for commercial fishermen, shippers of foods, fish, and flowers; hospitals, cafeterias, hotels, restaurants, bars, and dairies.

He points out that special models are available for removing latent heat from fruit juices, eggs, popsicle mixtures, and various other liquids.

## Timing Relay Available For A.C., D.C. Application

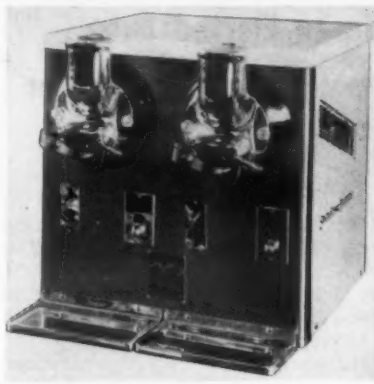
MILWAUKEE—The Bulletin 849 pneumatic timing relay is a new adjustable timer announced by Allen-Bradley Co., here.

It is available for alternating or direct current, and utilizes a synthetic rubber bellows for controlling the tripping time. The range is easily adjustable from 10 cycles to 3 minutes, with an accuracy of plus or minus 10%. The relay resets instantaneously.

The Bulletin 849 timer is available with quick make and quick break, double pole, silver alloy contacts—one set normally open and one set normally closed. Terminals are readily accessible.

A duplicate set of contacts for pilot control can also be provided, actuated directly from the solenoid, and opening and closing instantaneously with the action of the solenoid.

The unit can be readily changed from "on-delay" to "off-delay" operation by simply inverting the solenoid. The "on-delay" time delay interval occurs after the solenoid coil has been energized; the "off-delay" provides the time delay after the solenoid coil has been de-energized.



## Sweden's New Freezer Called 'Space Saver'

SEATTLE—The Sweden Freezer Mfg. Co., maker of soft ice cream machines and hardening-dispensing cabinets, has announced a new addition to its 1950 line of direct-service soft ice cream and frozen custard freezers.

The new model, called the "Space Saver," consists of the regular single and double head 4-qt. and 10-qt. freezer head sizes in greatly reduced over-all dimensioned table models, making them especially suitable for installation on backbars, cabinets, counters, or wall shelves.

These new models are available with or without a remote condensing unit and remote water or air and water-cooled condensing unit.

These new models retain the Sweden features of automatic freezing controls, high performance dashers, heavy-duty gear drive system, and sealed freezer cylinder insulation.

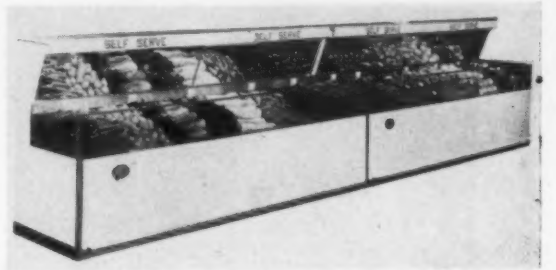
## Uses 'Atomized' Air with Directional Flow

MARSHALL, Mich.—The Sherer-Gillett Co. here has announced the production of a new open, self-serve, single duty case for the display of packaged fresh meats, luncheon meats, dairy products, or produce.

When used for fresh meats at temperatures of 28-32° F., a defrost timer is recommended, the company said.

The new model is designated as 241OCS when equipped with mirrored superstructure and as 241OC when the superstructure is replaced by a stainless steel cap, making it possible to use the new case in line with service cases.

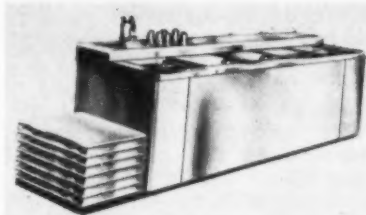
The new model utilizes the Sherer coiling principle of atomized air with



directional flow. It is stated by the company that the 10-ft. cases only require a 1/2-hp. condensing unit for produce and dairy products in a 90° room.

The new models, whether equipped with or without superstructure, are easily joined for continuous display, a kit being available for that purpose.

## Fogel Adds Combination Bottled, Draft Beer Cooler



PHILADELPHIA—A new beverage cooler and a combination bottled and draft beer cabinet have been added to the Fogel Refrigerator line of commercial refrigeration equipment for 1950, the company announced recently.

Both units have the "Fogel-Aire"

system of refrigeration which is claimed to cool more than twice as quickly as usual systems.

The beverage cooler is available in 4, 5, 6 1/2, and 8-ft. lengths. Depending on the length, the unit holds 23, 31, 38, or 44 cases of 6-oz. bottles.

The club bar is said to have an interchangeable arrangement which allows the draft and bottle compartments to be switched to meet all varying business needs. Available in 5 and 8-ft. lengths, the club bar has two draft stations located at each end of the cabinet.

Both units are constructed with stainless steel and are available either self-contained or remote.

# IT'S READY!

Thanks for Waiting

A comprehensive new bulletin on the complete Marlo line of air conditioning units, with many new illustrations and simple explanations of many new designs.



## Howard Refrigerator Makes 3 New Frozen Food Cases

PHILADELPHIA—Three new all-welded steel frozen food cabinets are now available from Howard Refrigerator Co., Inc., here, it has been announced.

The cabinets are being produced in 12, 16, and 24-cu. ft. sizes. An 18-in. superstructure with three-dimensional pictures in full natural color can be had as optional equipment.

Sliding doors of the models are hermetically sealed, glazed in stainless steel frame. All are insulated with 5 in. of Fiberglas.

Dimensions of the cabinets are as follows: 12 cu. ft.—59 in. by 36 in. by 29 in.; 16 cu. ft.—71 in. by 36 in. by 29 in.; 24 cu. ft.—101 in. by 36 in. by 29 in. Gross capacities range from 380 to 975 12-oz. packages.

## DISTRICT SALES SUPERVISOR WANTED

Nationally known manufacturer of commercial refrigerators has unusually attractive proposition for aggressive representative for all or part of the following territory: Kentucky, Tennessee, North Carolina, Virginia, West Virginia, Maryland and District of Columbia. Earnings limited only by ability to develop territory for which the groundwork is already laid. Our own personnel know about this advertisement. Please furnish details experience, education, present connection, etc. in first letter.

Address Box 3390, Air Conditioning & Refrigeration News

Send for your free copy!

MARLO COIL CO.  
6129 Manchester Ave., St. Louis 10, Mo.  
Gentlemen: Please send your new "Air Conditioning Units" bulletin to  
Name .....  
Company Name .....  
Address .....  
City ..... Zone ..... State .....

Marlo COIL COMPANY • SAINT LOUIS 10, MISSOURI



## Kitchen Just Like Home



A full size Crosley 7-cu. ft. refrigerator can be seen at the left of the doorway of this kitchen in the 34-ft. Pontiac Coach trailer. A gas range and twin sinks are also included.

## Krich-Radisco Appoints Three District Managers

NEWARK, N. J.—Three new district managers have been appointed by Krich-Radisco, Inc., northern New Jersey area distributor, Paul R. Krich, executive vice president, announced recently.

Alexander K. Brower, recently associated with David Kaufman's Sons, Baltimore distributor, has been named to Krich-Radisco's Norge division. He will handle Sussex, Warren, Morris, and Passaic counties, as well as portions of Bergen, Essex, and Union counties.

Milton T. Chlebnikow, assigned to the distributor's RCA Victor division, will be responsible for the territory which includes the following counties: Sussex, Passaic, excluding Clifton, Passaic, and Little Falls; Hackensack and Bergen county north of Garfield, Lodi, Englewood, and Teaneck; and part of Morris.

Bernard A. Bender, appointed to the Bendix sales division, will be responsible for the sale of Bendix automatic home laundry equipment in Passaic, Morris, and Sussex counties and part of Union county.

At the same time, Krich revealed that Q. L. Hildebrand has been appointed assistant to Barney G. Krich, vice president in charge of the distributor's Bendix sales division.

## Western Distributor Named

ALLIANCE, Ohio—Appliance Mfg. Co. has announced the appointment of Richards & Conover Hardware Co. as Duchess washer distributor. The company will have exclusive distribution of the washers in western Missouri, Kansas, Oklahoma, and the Texas Panhandle.

## Full Size Refrigerator Installed In 34-Ft. Trailer

DRAYTON PLAINS, Mich.—Claimed to be "just like a five-room home," the new 34-ft. house trailer recently introduced by Pontiac Coach Co. here comes equipped with a standard size 7-cu. ft. Crosley Shelvador refrigerator, the company has announced.

This refrigerator is also standard equipment in the company's 28-ft. house trailer, and it is available in the 22 and 26-ft. long trailers, but at additional cost, the firm explains.

Pontiac Coach believes this may be the first time a full-size refrigerator has been offered as a standard part of house trailers, most trailers having refrigerators usually providing special, compact smaller units.

As can be noted in the accompanying photo, the Crosley refrigerator is placed along one wall in the kitchen section of the trailer. Also featured is an A-B gas range, twin sinks, and residence type plumbing "installed in accordance with accepted sanitary codes"—individually trapped and connected with single outside drain, properly vented—which permits immediate connection to municipal or trailer park drainage openings, the manufacturer states.

## Teleking Adds Duchess Line

ALLIANCE, Ohio—Teleking Corp. of New Jersey, with headquarters in Newark, has been appointed exclusive distributor for Duchess washers in northern New Jersey and Rockland county, N. Y., it was announced by F. W. McGrath, vice president in charge of sales, Appliance Mfg. Co. which is located here.

## Edgren Elected IEEDA President, New Chapter Officers Announced

SPOKANE, Wash.—Claude Edgren, Colfax, Wash., was elected president of the Inland Empire Electrical Dealers Association for the forthcoming year at a meeting of the association's board of governors in Spokane last month.

He succeeds R. W. Burch, Coeur d'Alene, Idaho, who will continue to serve on the organization's executive committee.

Stanley Densow, Spokane electrical dealer, was named vice president, succeeding Edgren in that office. F. A. Tool, Washington Water Power Co., Spokane, was re-elected secretary.

W. J. Maghan, General Appliance Co., Spokane, will remain as treasurer. Robert L. Wilkinson, Spokane, was re-appointed executive secretary.

Results of elections of various chapters of the association were announced at the Governors' meeting.

New Coeur d'Alene chapter officers are: Robert Whiteley, Whiteley's Electric, president; Al Barrett, City Electric, vice president; Gordon DeFoe, Washington Water Power Co., secretary; Earl N. Dawson, Cope Electric, governor-at-large; and R. W. Burch, Burch's Furniture; R. W. Carlson, Atlas Tie Co.; Charles Polston, Post Falls Hardware, Post Falls, Idaho; and E. A. Krieg, O'Dwyer Hardware, St. Maries, Idaho, directors.

The Lewiston chapter has selected Harley Steiner, Steiner Radio & Electric, president; Paul Schurman, Schurman-Wasem, Clarkston, vice president; J. J. Fox, Washington Water Power Co., secretary-treasurer; Melvin Stewart, Lewiston Refrigeration, governor-at-large; and Coy Barnes, Erb Hardware; John Nanninga, John's Electric; Bud Bartlett, Lewiston Refrigeration; and Carl Harris, East End Trading Co., directors.

1950 officers of the Palouse chapter will be Willis Shaver, Shaver Electric, LaCrosse, Wash., president; Byron Henry, Pullman Appliance & Music, Pullman, Wash., vice president; L. A. Winn, Washington Water Power Co., Pullman, Wash., secretary; J. B. Williams, Williams' Firestone Store, Colfax, Wash., treasurer; Claude Edgren, Colfax, Wash., governor-at-large; and Joe Brunzell, Moscow Electric, Moscow, Idaho; S. C. Haddock, Haddock's, Moscow, Idaho; and Joe Cada, Potlatch Mercantile, Potlatch, Idaho, directors.

New Stevens chapter officers are Vern Barney, City Electric, Colville, Wash., president; John Kinkaid, Valley Electric, Chewelah, Wash., vice president; R. T. Paine, Washington Water Power Co., Colville, Wash., secretary-treasurer; and J. W. Bouska, Bouska Hardware, Chewelah, Wash., governor-at-large.

Spokane chapter leaders include M. E. LaCounte, Columbia Electric, president; Lloyd Distad, Lloyd's Sales & Service, vice president; F. A. Tool, secretary; Lester Barnes, Maxwell's, treasurer; John F. Boothe, Brown-Johnston Co., governor-at-large; and E. S. Bergquist, Washington Electric; Stanley Densow; and W. J. Maghan, directors.

Big Bend chapter members have elected T. H. Bonk, Edgren & Cox, Sprague, Wash., president; Clarence Kissler, Kissler's Appliance Store, Odessa, Wash., vice president; Fred J. Williams, Washington Water Power Co., Davenport, Wash., secretary-treasurer; Charles Breikreutz, Ritzville, Wash., governor-at-large; and Robert Hopp, Davenport Paint and Electric; Fred W. Denson, Denson Hardware, Davenport, Wash.; Earl Snyder, Snyder Electric, Wash-tuna, Wash.; Roy Kirby, Kirby Electric, Medical Lake, Wash., and Thomas Underwood, Ritzville Electric; directors.

## Admiral Names Columbia Distributor In Washington

CHICAGO—Columbia Distributing Corp., 2601 Market St., Seattle, has been appointed exclusive distributor for all Admiral refrigerators, ranges, radio-phonographs, and television receivers, for the entire western Washington territory, W. C. Johnson, vice president in charge of sales for the Admiral Corp., announced recently.

Officers of the newly appointed distributor include: D. Darke Russell, president and general manager, and Michael G. Hersh, vice president and treasurer.

## Woman Dealer Uses Intuition, Customer's Statements In Estimating Trade-In Value

### She Accepts Seller's Word, Buyer Accepts Hers

ST. LOUIS—A simple promotional program which she feels gives both store and customer the "best break" in the trade-in refrigerator question, has shown many advantages for Mrs. Nat Berman, operator of the Franklin Radio & Appliance Co., here.

Located in a moderate-income residential neighborhood, Mrs. Berman is St. Louis' only feminine appliance retailer. Ninety per cent of her sales are made to middle-income families in surrounding residential districts, who are invariably surprised to find that a personable young woman operates the modern appliance store, and who have plenty of reason to follow her suggestions in appliance purchasing.

Like most other appliance retailers Mrs. Berman has learned that it is necessary to take trade-ins on more than 50% of her new refrigerator sales.

### SYSTEM MAKES FRIENDS

Noting the loss of profit which other dealers have experienced, and also losses in good-will which have occurred through improper trade-in handling, Mrs. Berman has set up a simple program which she feels "makes friends for the firm" as well as keeping profits on new refrigerator sales "clean."

Under the plan, Mrs. Berman makes all of her trade-in allowances right in the store, without the usual visit to the customer's home, to estimate the worth of the box. Instead, she questions each customer closely, whether it is running, the make, date it was bought, and the approximate appearance of the finish.

From these factors, she is usually able to make an allowance which satisfies the customer, and which has proven profitable 95% of the time.

"I simply have to use my own judgment in the allowance problem," she indicated, "because it would not be practical for me to leave the store to estimate such trade-ins myself, or to pay a salesman to do the same thing."

### FEW 'WRONG GUESSES'

Most of Mrs. Berman's customers are thoroughly honest in describing the condition of their trade-in boxes, with the result that there have been very few "wrong guesses."

After the refrigerators arrive at Franklin Radio & Appliance Co., they are reconditioned by a mechanic, who comes in to do the work when requested by the woman dealer.

"We have been able to hold our reconditioning costs down in this way, by accumulating enough to make a considerable amount of work for the mechanic," Mrs. Berman explained.

"For example, he overhauls the average box for from \$5 to \$10, including complete adjustment, inspection, and even recharging of the gas. If the box exterior is in bad condition, he will respray it for \$10, which is a standard price."

About 75% of the trade-in refrigerators accepted are given a new spray job and otherwise "given a new face" before being placed on the sales floor. In making up the sales price, Mrs. Berman figures the

original allowance, the \$10 to \$15 which was spent on reconditioning, and \$2.50 for drayage.

Despite the inclusion of these costs, she sells the average trade-in for only from \$50 to \$60—a moderate price which results in swift turnover.

"It might be possible to charge a little more and show a larger profit," Mrs. Berman indicated. "However, since we are limited for space, we prefer to turn them over rapidly, and an attractive price has been the most adequate means of doing this."

The Franklin Radio & Appliance Co. does not guarantee its trade-ins, but instead, Mrs. Berman makes a thorough study of each, and tells the customer honestly what service can be given.

For example, each refrigerator is plugged in and operates the entire time it is on the sales floor. During this time, Mrs. Berman watches the refrigerator closely, and determines how long it takes to freeze two trays of ice cubes, for example, and tells the ultimate prospect.

### TELLS WHOLE TRUTH

"When I can tell a customer that a refrigerator runs a little noisily, but that it will freeze ice cubes in two hours flat, he is invariably impressed," the woman dealer stated, "and of course, we make every effort to see that the box is in good condition before it leaves the store."

"As a result, our customers accept what we have to say about the box in good faith, and we never encounter any suspicion or hesitation on the part of trade-in purchasers."

In this way, the average trade-in refrigerator stays in the store for one week, during which time, Mrs. Berman calls the mechanic, sees to reconditioning of the box, and sells it. The few "lemons" which have come up in trade-in dealings have been sold through advertising them.

As a direct result of this system, the small neighborhood appliance dealership sells a new refrigerator volume which would be creditable to one four times its size—and trade-ins are no problem whatsoever.

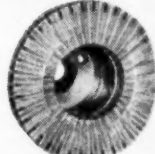
## Bendix Opens Branch

SOUTH BEND, Ind.—Bendix Home Appliances, Inc., has opened a direct factory branch at 1521 W. Lafayette Blvd., Detroit, according to Harlow K. Lyons, Bendix treasurer, who also directs the factory's branch operations.



Genuine Joe says...  
"WAGNER  
Commutators are the  
'Real McCoy'"

Wagner Commutators are best because they are precision built of the most carefully selected materials. Their rugged design provides extra strength and permits refacing with safety.

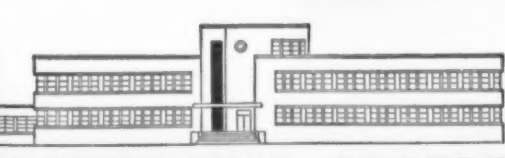


Wagner Electric Corporation  
6471 PLYMOUTH AVENUE, SAINT LOUIS 14, MO., U. S. A.

## NOW... you can control polyphase motors without line starters

Yes, it's true! But it can only be done with the PENN 270 Series Control... the first and only load-carrying, 2-pole switch in the refrigeration field. And, for single phase motors, it's better too, because it breaks both lines. Get the facts... the true story... on the Series 270 and on the code requirements for controlling refrigeration condensing units. Ask your wholesaler or write Penn Electric Switch Co., Goshen, Ind. Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ont.

**PENN**



**AUTOMATIC CONTROLS**

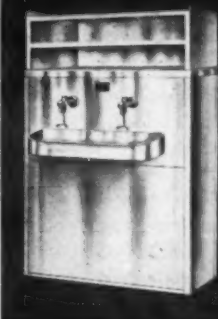
FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

GET THE FACTS  
Write Today

## Manufacturers of Coolers & Filters for over 40 Years

### CAFETERIA WATER COOLERS

Stainless steel. Special cafeteria design. High capacity, super storage. Shelves, glass-fillers and/or bubblers as required.



Costs no more  
Gives much more

Service  
Satisfaction  
Dollar value

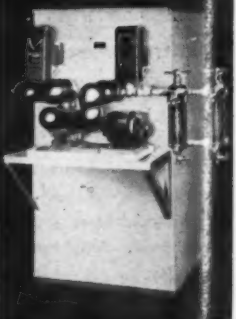
COOL, CLEAR, DECHLORINATED  
WATER WITH . . . .

**FILTRINE  
FILTER-DECHLORINATORS**

Eliminate tastes, odors, foreign particles. Promote cooler satisfaction—dealer sales.

### INDUSTRIAL PROCESS COOLERS

Temperatures to 34° sustained as set. Special features for bakery, bottling, other processes. Rugged construction.



A Few Choice Areas Open for Factory Representatives

**FILTRINE MANUFACTURING CO.**  
53 LEXINGTON AVE., BROOKLYN 5, N.Y.





Fresh vegetables, greens, fruits, etc., are prepared well in advance of rush hours and stored in a refrigerator until needed. Miss Doris Johnson, food production manager at one of the stores, checks on dehydration.

## Whether Chops or Rolls--They All Have the Right Temperature



ABOVE: After mixing several trayfuls of cloverleaf rolls, Baker Kenneth Puffard places them in this dough-retarding refrigerator.

LEFT: Miss Rosemary Kirk, assistant food production manager at one of the restaurants, checks condition of veal chops.

## Network of Refrigeration Enables Midwest Restaurant Chain To Concentrate Effort On 'Beforehand' Preparation of Most Foods

DETROIT—Thanks in no small degree to refrigeration, the large and highly popular Greenfield-Mills restaurant chain can serve 25 customers per employee "with very little confusion" because most of the preparation is done a day or several hours ahead of the actual serving.

"We do all preparation that can be done, without sacrificing flavor, nutritive value or freshness of the food, the day ahead or early in the day to clear the decks for action during the serving periods," explains Miss Winifred Eliason, director of food for the organization, which operates six large and usually crowded restaurants in Detroit, Cleveland, Columbus, and Cincinnati.

The role that refrigeration plays in operating this restaurant chain received considerable emphasis when Miss Eliason outlined the firm's food-

handling techniques before the Illinois Dietetic Association.

"There is no acceptable excuse for not having everything ready and on our counters at the opening gong. It takes careful planning and scheduling of work to avoid trouble.

"The production manager is responsible for writing the menus. These are posted a week in advance in the salad department and bake shop, and at least three days ahead in the kitchen. . . .

"The butcher bones and ties his roasts, cuts stew meats, and cuts meats ready for grinding the day before these are to be used. The vegetable preparation department strips and washes celery, scrapes carrots, and peels onions the day before they are to be used.

"Then the cooks cut these vegetables for soup or stews, storing them in the refrigerator, covered, to prevent escape of flavor and deterioration from drying. Soup and gravy stock are started the day before and are finished the next morning, having simmered slowly all night. . . .

"A few hours ahead of time vegetables are prepared, ready to be cooked by the vegetable department, and are refrigerated," Miss Eliason adds. "The vegetable cook removes a small amount of vegetables at a time from the refrigerator for cooking. We try to cook only enough of any vegetable at one time to insure disposal within one hour. Of course, during rush hours the turnover is more rapid than an hour—often three or four times an hour.

"To prevent loss and deterioration due to curdling, cream soups are mixed several times during a serving period. The stock, however, is made ahead of time in one large batch and divided into several portions, to which specified amounts of hot milk are added.

"In the salad room, too, we do much preparation the day before," continues Miss Eliason. "Gelatin salads are made and refrigerated;

cabbage is cored and quartered ready for shredding the next day; celery is cut, refrigerated, and covered to prevent discoloring. Greens for tossed salads are washed, cut, and stored in tightly covered containers to crisp and to be taken out as needed.

"Head lettuce is cored, washed, and stored core side down in false bottomed, covered cans to drain and crisp in the refrigerator overnight. Salad dressings are made a day or two ahead and some kinds only once a week. Oranges and grapefruit are peeled ready to be sectioned the next

day, and covered carefully with a plastic sheet to prevent drying in the refrigerator.

"In the bakeshop we make fruit fillings for pies the afternoon before they are to be used in order that they will be cold before being put into pies. Lemon pie filling is made the day before, and cream fillings early in the day to cool before using. Pie shells are made in advance, and the pie crust mix is always made a day ahead to ripen.

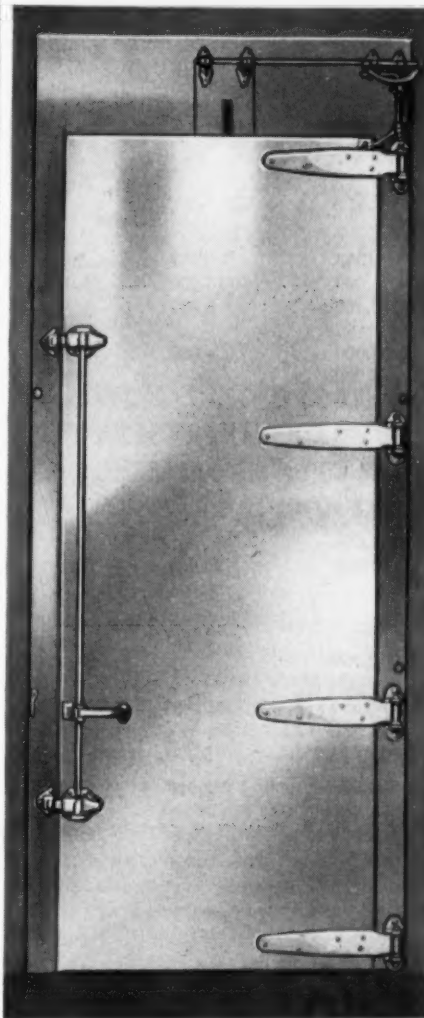
"We have at times made biscuit mix and muffin mixes, ready to add

liquids, but we have found that there is danger in this method.

"We sometimes refrigerate batters for muffins to hold for a few hours before baking, although the product resulting is not quite up to standard in volume and texture," commented Miss Eliason. "In some of our bakeshops we have retarding boxes where we hold yeast-raised rolls until they are needed; proofing and baking them fresh during the serving periods.

"We have also experimented with freezing rolls and pies, and there are possibilities in this method."

## DOORS to SATISFACTION

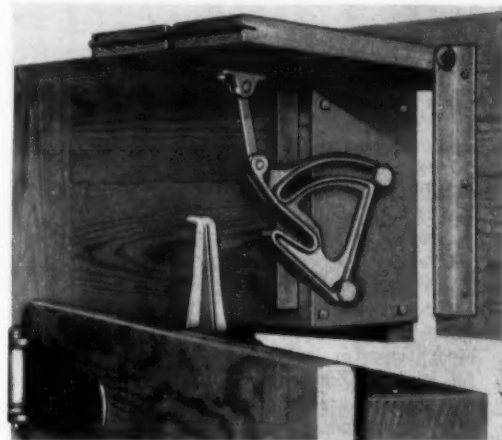


Husky, durable hardware for heavy duty cold storage doors

- instant smooth opening
- firm positive closing

### CBS TRACK DOOR OPERATOR

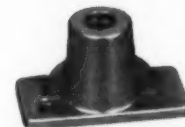
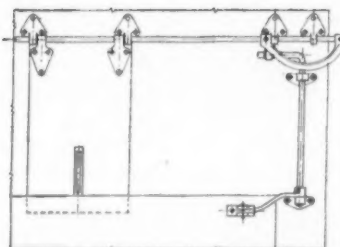
Malleable iron and steel  
Reversible  
Manufactured and sold under exclusive license from patentee



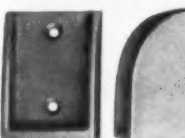
### BUMPER BAR — for actuating main door locks from inside



### No. 50 AUTOMATIC DOOR CLOSER — for main cooler doors



PODS for assembling sectional units. For 3/8 and 1/2-inch cut thread lag screws.



MEAT RAIL SOCKET to support wood meat-rails inside walk-in coolers

### No. Z-326 DOUBLE LOCK with inside push rod

### No. 1FCS HINGES

### No. 1 AUTOMATIC TRACK DOOR OPERATOR

WRITE FOR CATALOG 11

**ARCADE** MANUFACTURING DIVISION  
ROCKWELL MANUFACTURING COMPANY  
FREEPORT, ILLINOIS



Attractive desserts such as cream-filled or decorated pies and puddings are kept under refrigeration at all times.



Adequate refrigeration helps make possible quick and efficient service on tasty salads at the Greenfield-Mills restaurant chain. Here Waitress Helen Friend is removing salads from the refrigerator.



# 2-Year Pattern of Equipment Sales In 25 Areas of World Trade

	Iceland		Sweden		Norway		Denmark		United Kingdom		Eire (Ireland)	
	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948
Electric household refrigerators .....	136,000	67,000	1,325,000	1,000	81,000	71,000	7,000	30,000	80,000	117,000	159,000	35,000
Electric household refrigerator parts .....	2,000	4,000	161,000	46,000	20,000	10,000	1,000	3,000	286,000	308,000	22,000	9,000
Compressors and cond. units (com'l)												
1/2 hp. through 3 hp. ....	12,000	1,000	440,000	74,000	128,000	62,000	2,000	1,000	19,000	2,000	117,000	32,000
Over 3 hp. through 10 hp. ....			9,000	5,000	5,000	3,000			5,000	15,000	4,000	
Over 10 hp. ....	3,000	4,000	13,000	7,000	3,000	3,000	14,000			38,000		
Centrifugal refrigerating units* .....			4,000									
Evaporative condensers .....			1,000		2,000							
Condensers except evaporative .....			4,000		1,000					1,000		
Heat transfer equipment .....	5,000	1,000	33,000	10,000	8,000	1,000				19,000	1,000	3,000
Ice making equipment .....			41,000	1,000	7,000	1,000	4,000		15,000	11,000	15,000	21,000
Air diffuser units .....			8,000									
Self-contained com'l refrig. equip. ....	6,000	8,000	162,000	24,000	49,000	15,000	15,000		61,000	51,000	154,000	31,000
Liquid coolers .....			3,000		5,000							
Self-contained air conditioners												
Under 2 tons .....									1,000	2,000	2,000	
2 tons and over .....					1,000	1,000				24,000	8,000	
Mechanical com'l refrigerators .....	4,000	1,000	41,000	91,000	1,000	2,000			7,000	21,000	18,000	5,000
Auxiliary equipment .....	24,000	7,000	330,000	26,000	65,000	45,000	28,000	1,000	241,000	184,000	57,000	17,000
Parts for foreign assembly .....	2,000		14,000						1,000	189,000	1,000	
Replacement parts .....	7,000	2,000	126,000	22,000	6,000	6,000	6,000	1,000	67,000	39,000	28,000	10,000
<b>Total</b> .....	<b>101,000</b>	<b>95,000</b>	<b>2,715,000</b>	<b>307,000</b>	<b>380,000</b>	<b>222,000</b>	<b>57,000</b>	<b>55,000</b>	<b>783,000</b>	<b>1,021,000</b>	<b>586,000</b>	<b>163,000</b>

	Netherlands		Belgium		France		Switzerland		Spain		Portugal	
	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948
Electric household refrigerators .....	124,000	59,000	728,000	1,507,000	266,000	385,000	366,000	733,000	66,000	30,000	271,000	175,000
Electric household refrigerator parts .....	47,000	12,000	117,000	106,000	346,000	221,000	47,000	83,000	7,000	6,000	24,000	7,000
Compressors and cond. units (com'l)												
1/2 hp. through 3 hp. ....	188,000	136,000	378,000	588,000	47,000	48,000	94,000	188,000	3,000	6,000	56,000	47,000
Over 3 hp. through 10 hp. ....	10,000	1,000	40,000	23,000	3,000	5,000	9,000	12,000			11,000	4,000
Over 10 hp. ....	3,000	1,000	6,000	79,000	40,000	1,000		33,000	8,000		7,000	35,000
Centrifugal refrigerating units* .....			109,000		1,000	75,000	7,000				1,000	
Evaporative condensers .....	1,000		5,000	1,000	2,000	1,000	1,000					
Condensers except evaporative .....	3,000		3,000	1,000	5,000	1,000	3,000					
Heat transfer equipment .....	11,000	5,000	25,000	41,000	66,000	1,000	4,000	7,000			8,000	5,000
Ice making equipment .....	5,000	1,000	12,000	173,000	6,000	31,000	5,000	96,000			13,000	3,000
Air diffuser units .....			24,000	6,000	9,000		2,000				3,000	2,000
Self-contained com'l refrig. equip. ....	107,000	18,000	323,000	200,000	102,000	27,000	24,000	128,000	2,000	3,000	54,000	44,000
Liquid coolers .....		1,000	1,000	2,000	34,000		1,000	2,000				
Self-contained air conditioners												
Under 2 tons .....	9,000	3,000	3,000	37,000	1,000	1,000	4,000	6,000	1,000	2,000	4,000	
2 tons and over .....	3,000	1,000	7,000	40,000	41,000	12,000		26,000			1,000	2,000
Mechanical com'l refrigerators .....	21,000	5,000	23,000	66,000	1,000	13,000	5,000	16,000			9,000	7,000
Auxiliary equipment .....	85,000	83,000	174,000	278,000	257,000	138,000	167,000	178,000	9,000	5,000	63,000	49,000
Parts for foreign assembly .....	1,000	10,000	7,000	12,000	5,000	24,000	7,000	8,000			7,000	
Replacement parts .....	15,000	7,000	33,000	31,000	112,000	41,000	33,000	47,000	3,000	11,000	28,000	7,000
<b>Total</b> .....	<b>633,000</b>	<b>343,000</b>	<b>2,018,000</b>	<b>3,191,000</b>	<b>1,344,000</b>	<b>1,025,000</b>	<b>779,000</b>	<b>1,563,000</b>	<b>99,000</b>	<b>63,000</b>	<b>560,000</b>	<b>387,000</b>

	Italy		Greece		Russia		Poland		Turkey		Syria	
	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948
Electric household refrigerators .....	12,000	49,000	116,000	71,000	13,000	5,000	1,000		422,000	248,000	295,000	39,000
Electric household refrigerator parts .....	14,000	27,000	8,000	15,000	8,000				60,000	9,000	23,000	2,000
Compressors and cond. units (com'l)												
1/2 hp. through 3 hp. ....	8,000	22,000	26,000	97,000	4,000	4,000			51,000	39,000	23,000	1,000
Over 3 hp. through 10 hp. ....	2,000		9,000	1,000					22,000	8,000	8,000	
Over 10 hp. ....				17,000		4,000	32,000	64,000	7,000		31,000	
Centrifugal refrigerating units* .....		3,000	1,000								8,000	
Evaporative condensers .....			1,000						6,000			
Condensers except evaporative .....					1,000		18,000				4,000	
Heat transfer equipment .....		26,000	3,000	16,000	4,000				1,000		14,000	
Ice making equipment .....			15,000				22,000		14,000	10,000	18,000	6,000
Air diffuser units .....			5,000	1,000			3,000		7,000	4,000		
Self-contained com'l refrig. equip. ....	11,000	4,000	55,000	61,000	28,000	15,000	68,000		179,000	54,000	157,000	14,000
Liquid coolers .....					10,000						7,000	
Self-contained air conditioners												
Under 2 tons .....					1,000				5,000	2,000	11,000	
2 tons and over .....			10,000	2,000		18,000	5,000		13,000	8,000	4,000	3,000
Mechanical com'l refrigerators .....	23,000		227,000	6,000			13,000		33,000		40,000	
Auxiliary equipment .....	30,000	94,000	23,000	58,000	190,000		29,000		102,000	22,000	70,000	1,000
Parts for foreign assembly .....			2,000								1,000	27,000
Replacement parts .....		6,000	11,000	18,000	3,000		1,000		39,000	28,000	14,000	6,000
<b>Total</b> .....	<b>100,000</b>	<b>231,000</b>	<b>512,000</b>	<b>363,000</b>	<b>262,000</b>	<b>46,000</b>	<b>191,000</b>	<b>64,000</b>	<b>961,000</b>	<b>432,000</b>	<b>728,000</b>	<b>99,000</b>

\*Includes absorption and adsorption systems.

Available from  
1/2 to 10 H.P.

**CLEANABLE  
DOUBLE-TUBE  
COUNTER-FLOW  
WATER-COOLED  
CONDENSERS**

Write for literature

**Halstead & Mitchell**  
BESSEMER BLDG.  
PITTSBURGH 22, PA.

**MOTOR-BASE  
ADAPTERS**

Don't be fooled.  
Makeshifts  
won't do. Use  
genuine 100 per  
cent universal  
motor adapters.

1/2 to 1/2 hp.—101-D  
1/2 to 3/4 hp.—102-C  
1 to 3 hp.—103-C

**SERVICEMEN SEE YOUR JOBBER**

**Motor Adapter Corporation**  
4730 JOY ROAD  
DETROIT 4, MICHIGAN



**Editor's Note:** The accompanying tabular breakdowns on world trade sales in 25 countries continue the series begun by Eugene Hesz, international market analyst and instructor at the University of Detroit. Others will follow in succeeding issues of the News.

## South African Men's Clothing Store Has Air Cooling Units Installed In Paneling To Make Them 'Invisible'

JOHANNESBURG, Union of South Africa—"Invisibly" installed in the fine paneling of the exclusive Carlton Man's shop redesigned center, New Chrysler Airtemp package units are automatically cooling the whole inside area.

This form of air conditioning is comparatively new to this type of retail shop in South Africa, but it is rapidly being accepted as a vital sales aid, reports Air Conditioning and Engineering Co., Airtemp distributor here.

Finland			
	1947	1948	
Electric household refrigerators .....	1,000	1,000	
Electric household refrigerator parts .....	1,000		
Compressors and condensing units (com'l)			
1/2 hp. through 3 hp. ....			1,000
Auxiliary equipment .....	3,000	5,000	
Replacement parts .....		2,000	
<b>Total</b> .....	<b>5,000</b>	<b>9,000</b>	

Yugoslavia		Czechoslovakia	
1947	1948	1947	1948
Electric household refrigerators .....	1,000	1,000	5,000
Electric household refrigerator parts .....			5,000
Compressors and cond. units (com'l)			
Over 3 hp. through 10 hp. ....		1,000	
Self-contained com'l refrig. equip. ....	40,000		7,000
Mechanical com'l refrigerators .....	573,000		16,000
Auxiliary equipment .....	9,000		17,000
<b>Total</b> .....	<b>623,000</b>	<b>2,000</b>	<b>50,000</b>

Hungary		Rumania	
1947	1948	1947	1948
Electric household refrigerators .....	1,000		
Electric household refrigerator parts .....	1,000		
<b>Total</b> .....	<b>2,000</b>	<b>2,000</b>	<b>1,000</b>

Bulgaria		Albania	
1947	1948	1947	1948
Self-contained com'l refrig. equip. ....		1,000	
Mechanical com'l refrigerators .....			193,000
<b>Total</b> .....	<b>1,000</b>		<b>193,000</b>



# Glycerine In Air Conditioning

Besides Its Use as Pipe-Sealing Compound and Low Temperature Lubricant, Glycerine Aids Air Filtering Processes

By Milton A. Lesser  
Glycerine Producers' Association

Most technicians in the field of air conditioning are familiar with glycerine to some extent, even if only as a component of pipe-sealing compounds or low-temperature lubricants.

But do they realize the many and varied ways in which this versatile liquid can contribute to greater efficiency and better results?

Glycerine is a highly important industrial material, having a rare combination of physical properties.

Glycerine is a clear, heavy, viscous fluid which lends "body" to liquids and permits the suspension of various insoluble substances. It is itself an excellent solvent for many substances.

It is one of the most important humectants with the ability to attract and retain moisture. This hygroscopic effect is one of the factors contributing to glycerine's status as a plasticizing agent.

Its smooth feel and viscosity make glycerine a natural lubricant, one that is readily removed with water. Valued for the ability of its solutions to remain fluid under low-temperature conditions, glycerine also rates importance because of its high boiling point and low vapor pressure.

Glycerine is an important chemical substance. The tough and durable finishes on air conditioning units, for example, may owe their superior properties to the presence of an alkyl resin, made by reacting glycerine with phthalic anhydride.

Certain properties of glycerine, such as its hygroscopic action, water-solubility, high boiling point, are finding increased use in the preparation of the viscous dust-trapping fluids used in filters.

Air filters for the removal of dust, soot, and pollens are usually moistened with a rather viscous liquid to which the undesired particles will adhere.

Unless it is of the throw-away type, the dust-laden filter must be washed and a suitable quantity of the adhesive liquid reapplied to the surface of the filtering material.

When this liquid is a petroleum oil, the dirty oil must be washed away either with a solvent (which is often hazardous), or with soap and water.

## Water Rinses It Away

If, however, the entrapping liquid is water-soluble, it can easily and cheaply be removed by rinsing with plain water. This results in a substantial economy over the common throw-away units and eliminates the dangers of cleaning oil-treated filters

with solvent.

As a result of investigations made at the research laboratories of the Glycerine Producers' Association, J. B. Segur reported that glycerine provides a simple yet highly efficient liquid for application on air filters.

It is easily applied, effectively holds dust and is readily washed off with water. The glycerine may be used as an aqueous solution of approximately 50% concentration by weight or 46 to 47% by volume.

Into this solution is dissolved 0.2% of glue or other viscosity-increasing material. The finished solution weighs about 9 1/4 lbs. per gal.

Because, in some installations, the filters may be placed close to hot furnace pipes, it was decided, from the standpoint of safety, to study the flash and fire points of glycerine solutions.

Tests were made on solutions with glycerine concentrations ranging from 99 to 50% and including a 50% solution containing 0.2% of glue.

The flash and fire points of glycerine solutions were found to be largely independent of the initial concentrations of the solutions. All samples burned at 400° F. or within five degrees of that temperature.

## No Unusual Fire Hazard

The presence of glue did not significantly affect the flash and fire points. These tests showed that the use of glycerine on air filters does not introduce any unusual fire hazard because oils of similar flash point are used for the same purpose. Glycerine, of course, is entirely safe to handle and use.

Glycerine has also been used in the production of more elaborate dust-trapping fluids for air filters.

In one case a glycerine reaction product is employed to make a non-volatile, non-inflammable, odorless, and chemically stable, dust-collecting fluid for impregnating the porous structure of air filters in air conditioning units.

According to M. E. Cupery's patent, the fluid is prepared by esterifying glycerine and sulfamic acid. The resulting product is treated with a small proportion of wetting agent plus a rather minute amount of an efficient fungicide.

After heating for a specified period, the mixture is neutralized with an alkali and filtered. The viscosity of the final solution may be adjusted readily with water, as required.

In another instance glycerine or certain of its water-soluble derivatives may serve as the vehicle for filter screen wetting compounds. Such fluids are used in special equipment

for humidifying and cleaning the air.

Because of its efficient hygroscopic action, glycerine can contribute to the control of the moisture content or humidity of the air. Because of this effective action, glycerine has long been used for drying gases.

As pointed out by E. G. Hammer-schmidt, aqueous glycerine solutions have been used successfully for removing water vapor from gases—but special precautions are necessary to prevent decomposition of the glycerine when removing the absorbed water from the diluted solution.

Of special interest in this connection, and particularly with respect to the use of glycerine in air conditioning, is H. F. Smith's apparatus for concentrating air conditioning solutions.

The equipment, which is designed to treat solutions of glycerine, calcium chloride, and the like, includes a heater for the circulating liquid, a motor and blower, and a switch that is responsive to the specific gravity of the liquid being treated. This sensitive switch controls the operation of the motor and blower.

Also indicative of glycerine's potentialities is a statement made by A. Weisselberg in a discussion on the chemical de-humidification of air.

In considering the action of hygroscopic absorbents, he points out that

for glycerine at 0° C. a variation in concentration of from 80 to 120% (anhydrous basis) corresponds to a change in equilibrium relative humidity from 76 to 83%.

He also notes that change in temperature has little effect on the equilibrium relative humidity.

"With such an absorbent," says Weisselberg, "it is possible to remove much moisture and the corresponding amount of latent heat per unit weight of absorbent without much change in the condition of the dehumidified air."

Nowadays air disinfection is becoming linked to air conditioning. There are indications that glycerine will also fit into this newer phase of the industry.

However, during one series of studies it was discovered that the addition of a small proportion of glycerine to the more effective compounds had a stabilizing effect on the "mists" and produced a considerably longer lasting bactericidal aerosol.

## Monitors Warn of Toxic Concentrations In Air

Of related interest is the role played by glycerine in various air-monitoring devices. These give warning when certain substances have reached dangerous concentrations in the air.

In one such device, for detecting toxic concentrations of chlorine or bromine, glycerine is employed as a hygroscopic agent to retain the requisite amount of moisture in the test solution and thus maintain its sensitivity.

In another instance, glycerine is employed as an antifreeze for the solutions used in gas detecting.

Some years ago, it was suggested that glycerine might be used to ad-

vantage in air cooling systems. In one series of patent specifications glycerine was listed as being suitable for use with ammonia in various refrigerating systems.

Very recently, specific and detailed information on the refrigerating capacity of glycerine-water systems was published by Gucker and Marsh.

Because of its ability to remain fluid and efficient under frigid conditions, glycerine has long served as a low temperature lubricant. Indeed, glycerine was used as the lubricant in some of the first household refrigerator machines.

Glycerine has also been advocated as a major component of lubricating and sealing liquids for use in refrigeration systems. The use of glycerine as a lubricant for the carbon dioxide compressors in refrigeration systems is well established.

Glycerine-litharge cements, made by mixing glycerine and litharge, with or without water or inert fillers, have an excellent reputation for their ability to set rapidly and form bonds or seals of notable hardness, resistance, and durability.

Thus, in discussing the maintenance of air conditioning units, C. F. Boester points out that most ammonia refrigeration piping is done with screwed fittings and the use of glycerine-litharge compound.

When this "pipe dope" sets up, the joint is every bit as tight as a welded connection, insofar as refrigerant leaks are concerned.

In a similar vein, A. B. Duryee advises that to hold ammonia, threads must be full and clean-cut; a renewal of damaged or broken threads is advocated. Duryee also stresses that a paste of glycerine and litharge should be applied to the pipe thread, not inside the fitting.



"Say! Have you heard about the new completely Hermetically Sealed Refrigerating System in York Air Conditioning Units?"

"Sure! Everybody's talking about it—and it carries a full 5-year guarantee! I could sell these new 1950 Yorkaires to Eskimos!"

FROM COAST TO COAST YORK DEALERS ARE TALKING ABOUT THE NEW UNBEATABLE LINE OF YORK PRODUCTS FOR YEAR-ROUND SALES IN 1950!



NOW'S THE TIME to get yourself set to cash-in on the BIG snowballing demand for summer air conditioning. As a York Dealer you can offer the new amazingly efficient, appealingly priced Yorkaire Room Conditioners—window-sill and console models—for homes, business and professional offices, and small stores and shops. And the new, sensational Yorkaire Conditioners for stores, bars, restaurants, theaters and hotels.

And air conditioning is just one of the services you can offer as a York Dealer. Other equipment you can sell the year-around includes: York's fast-selling Automatic Ice Maker. Produces Yorkubes—the famous ice cubes with the hole—and crushed ice too, at the flip of a switch! And the FlakIce Machine which provides great quantities of frosty, "velvet-touch" ice ribbons for food packing, display, and general use.

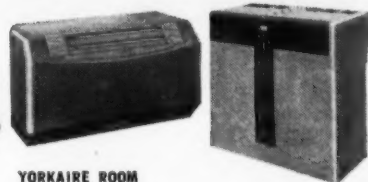
Then there are the York Frozen Food Cabinets—big sellers for large homes and institutions—and auxiliary storage of extra quantities of food and other perishables

for commercial establishments. And York Condensing Units and Unit Coolers—first choice of many retailers for walk-in and reach-in coolers, and dozens of other commercial and industrial applications.

But products are only part of the story. Behind York's unbeatable, complete line of air conditioning and refrigeration products, is one of the industry's strongest dealer campaigns: Direct mail programs, national advertising in consumer, industrial and trade publications, local newspaper and radio advertising, educational slide films, sales promotion tools of every type, modern sales training in field-tested techniques from approach to close, the backing of a powerful, capable York Distributor, and the prestige of the York name—known as pioneers and leaders for seventy-five years.

Get complete details of how and why you can step up your annual profits with sales of York equipment the year-around. See if a York Dealer Franchise is available in your territory. Write today. York Corporation, York, Penna.

## AVAILABLE TO YORK DEALERS!



YORKAIRE ROOM CONDITIONERS.

Window-sill and console types for homes and business. There's an almost limitless list of prospects for these units. Ratings from 1/2 hp. to 2 hp.



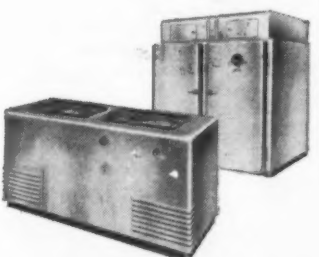
YORKAIRE CONDITIONERS. You're way, way ahead of competition when you offer these popular, popular-priced store conditioners. They're completely "packaged," quickly installed. Both 3 and 5 hp. ratings.



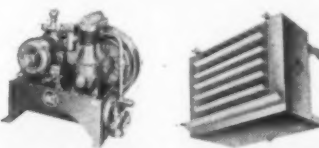
AUTOMATIC ICE MAKER. Every establishment and institution that uses ice is an easy-to-sell prospect for this unique ice cube and crushed ice producer. It sells itself because it pays for itself in short order!



FLAKICE MACHINE. Any business or industry that requires great quantities of ice for packing, display and general purposes is a red-hot prospect! Selling is easy because user savings are high!



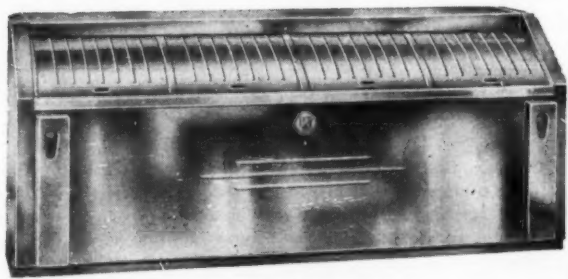
FROZEN FOOD CABINETS. Stores, farms and homes are live prospects for these units. They contain separate storage and deep-freezing compartments.



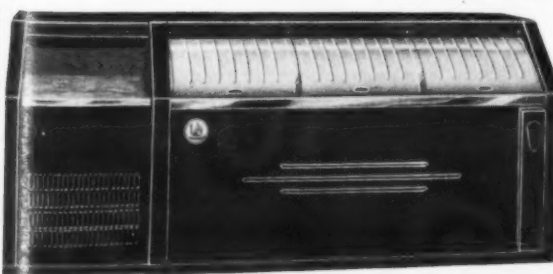
CONDENSING UNITS AND UNIT COOLERS. A complete line of range and size for every requirement.

## A MODEL TO FIT THE JOB!!!

Efficiency — Beauty — Convenience and Economy mark the La Crosse Dry Storage Cooler as the finest piece of equipment available. Curved, stainless steel, slide away doors are fingertip controlled. Adjustable partitions and shelf offers greater capacity. Sturdily constructed — recessed base—sizes 4'—8'—9' and 10'.



La Crosse Bottle Cooler



Dry Storage Bottle Cooler with Utility Housing

A model from the Complete Line of Commercial Refrigeration Equipment from La Crosse will fill the demands of any job.

OTHER POPULAR ITEMS FROM LA CROSSE: ICE CUBE MAKERS - WALK IN COOLERS - GLASS CHILLERS

LA CROSSE COOLER CO.

2809-17 Losey Blvd. So., La Crosse, Wisconsin

Export Representatives: Melvin Pine & Co. Cable address: Eximport 80 Broad St., New York 4, New York



PIONEERS IN INVENTION AND DEVELOPMENT SINCE 1874  
Refrigeration and Air Conditioning

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

OUR BUSINESS IS IMPROVING YOUR BUSINESS



## Bank Deposits by Counties Listed In New Booklet

WASHINGTON, D. C.—An important key to establishing market data for manufacturers, distributors, dealers, in fact all types of suppliers, may be provided in the recent compilation of bank deposits by counties just issued by the Federal Reserve System here.

Entitled "Distribution of Bank Deposits by Counties," the booklet shows the total amount of money on deposit in each county for individuals, partnerships, and corporations as of June 30, 1949.

The total figures for each county are further broken down to show the amount of "demand" deposits and "time" deposits, and these are also tabulated as totals for states and Federal Reserve districts.

Supplementary figures are also provided which show the totals of time deposits in mutual savings banks.

Incidentally, the grand total for the country as of June 30, 1949, is given as \$132,055,159,000. Of this "demand" deposits accounted for \$78,129,839,000, while "time" deposits totaled \$53,925,320,000.

## Shearn Corp. Incorporates

NEW YORK CITY—Articles of incorporation have been filed with the secretary of state for the Shearn Corp. to deal in heating and cooling systems. Thomas A. McCarthy, Garvin P. Kiernan, and Harry B. Davis are listed as directors. Capital stock is listed as 400 shares.

## Part of Frigidaire's New Appliance Line



(LEFT) Frigidaire's 1950 Imperial line of refrigerators are two-door models with separate Locker-Top freezers and Cold-Wall refrigeration in the main food compartment. Ice-Blue and gold interior trim is featured. (CENTER) Standard models are equipped with newly-located Super-Freezers, Meter-Miser compressors, and Quickcube ice trays. (RIGHT) Electric range model RM-35 is one of the new all-porcelain 30-in. models equipped with "giant" oven, four Radiantube surface cooking units, and full-width storage drawer mounted on nylon rollers.

## Introduction of 1950 Frigidaire Commercial Models Indicates Greater Emphasis on Streamlined Design

DAYTON—New and improved engineering design and new attractive styling have been incorporated into extensive commercial refrigeration and air conditioning equipment lines, which include more than 400 separate products, marketed by

Frigidaire Div. of General Motors.

Highlighting the broad lines are new smartly-styled glass-door commercial "reach-in" refrigerators; a new room air conditioner of ultra-modern design; new self-contained milk coolers, and a new water cooler. In addition a new large-capacity open-type Zero Self-Server is included in the wide ice cream cabinet line.

Rivaling their household refrigerator counterparts in advanced engineering design, attractive styling and appearance, are three new commercial refrigerators (RIL-27, RIL-44, and RIL-62) equipped with distinctive new doors featuring oval-shaped display windows. Produced for use in food and dairy stores, restaurants, flower shops, taverns, hotels, and other such establishments, these new models are especially designed to stimulate customer impulse buying. Each display window is constructed of three double-strength glass panes to keep the cold inside and the heat out. The three models, with food storage capacities of 27, 44, and 62 cu. ft., are also produced with conventional solid doors.

Cabinets are constructed of heavy gauge steel with welded over-lap joints sealed to keep out moisture. Interiors are finished in white porcelain with acid-resistant bottom panels. Three inches of fibrous glass insulate the walls, top, bottom, and doors. Automatic interior lights are standard on all models.

One of the most important features of these new refrigerators is a unique forced air cooling system, which is designed to provide a gentle, continuous flow of cold air throughout the compartment. An enclosed fan, located in the top, draws warm air from the food compartment and forces it over a large fin-type cooling unit. Cold, moist air is then returned to the lower part of the compartment by a concealed duct and distributed through an opening extending the full width of the cabinet.

Thus foods are protected in any section of the storage compartment and the loss of cold air is minimized when the doors are open. The "cold-control" switch is concealed under a removable panel at the left of the cooling unit.

An improved sealed and self-oiling Meter-Miser compressor is housed in a small ventilated space below the food compartment. New air intake openings in a stainless steel toe strip provide a continual flow of cool air over the condenser and compressor,

affording greater refrigeration capacity and lower operating costs. The entire refrigerating mechanism slides out as a package by removing a panel in the compartment and loosening two bolts.

Cooled by large ice-making units, two 17-cu. ft. refrigerators are produced (RIL-17 and RIL-17C), which can store up to 56 lbs. of frozen food in the freezing compartment. The freezer is equipped with Quickcube trays which will freeze up to 84 cubes or 12 lbs. of ice. These trays have automatic tray releases and lever-operated trigger-fast cube release. The freezer door is non-corrosive and there is an aluminum drip tray to catch excess moisture from defrosting.

A deep glass meat tray, 19 in. long, 11½ in. wide, and 4 in. deep is provided for storing fresh cut or packaged meats. In addition, a small fan circulates cold air in food compartment providing uniform temperatures.

Another feature is the "built-in" accessibility of the storage compartment. Equipped with six shelves pro-

viding 29.1 sq. ft. of storage area, all foods can be reached easily and removed with a minimum effort. There are two full-length doors.

In addition to manufacturing a ½-hp. window room air conditioner, a new 1-hp. window unit, complete with two separate Meter-Miser refrigerating systems, was announced as setting a new standard in effective streamlined package design and styling. The recessed control dial adds to smart, modern lines. A new and more attractive grille with adjustable louvers directs air to any part of the room.

The filter slips out through the bottom in a matter of seconds. Air is drawn in through the bottom rather than on the sides, thus contributing to the ease of installation in confined spaces and affording more quiet operation. These compact self-contained air conditioners afford all of the advantages of more expensive remote type units.

A new line of Frigidaire self-contained milk coolers has been developed, refrigerated by compact but powerful commercial Meter-Miser compressors.

Another outstanding new product is the new 20-gal. capacity pressure-type water cooler (WPL-1020). Finished in new harmonizing gray, it is lower in height for greater ease and convenience in drinking. Other features include a Magic-Action bubbler and the Meter-Miser refrigeration compressor. This new model will cool from 10 to 20 gals. of water per hour, from 80° on down to 50°.

The division will round out its line of open-type Zero Self-Server ice cream cabinets by adding a new 11.2-cu. ft. model (ICOL-112). Other models include one with 5.2 cu. ft. of storage space (ICOL-53), and another with 8.2 cu. ft. of storage space (ICOL-82). These open-type models have the same smart, ultra-modern styling and advanced engineering design as the division's wide line of self-contained white-lidded ice cream cabinets. Full-length top to bottom storage is provided by a radically new Meter-Miser compressor arrangement and a new under-the-cabinet condenser.

Other products include: Display cases, frozen food cases, beverage and water coolers, rotary and reciprocating compressors ranging from ½ to 25 hp., self-contained packaged air conditioners for home or business use, remote floor and suspended air conditioners, large central system air conditioners, forced air and gravity-type cooling units, controls, and accessories.



(LEFT) Frigidaire's commercial reach-in refrigerator features a new forced air cooling system, radical styling, and oval-shaped triple-pane display windows. (CENTER) Zero Self-Server, 11.2-cu. ft. ice cream cabinet. (RIGHT) Newly-styled 1-hp. window room air conditioner which circulates cool, filtered, dehumidified, fresh air.

## DEALERS - DISTRIBUTORS WANTED!

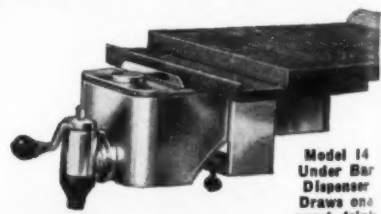
If you are prepared to handle sales, installation and service for our stainless steel soft drink dispensers for Bars and Taverns, advise business experience and some facts relative to your financial ability.

**INCREASES PROFITS FOR BARS AND TAVERNS**

Exceptionally profitable to handle.—Write to

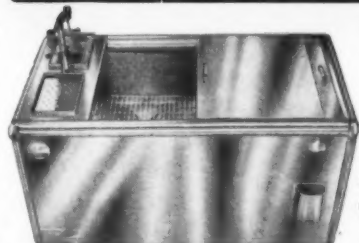
**MULTIPLEX FAUCET CO. 4325 DUNCAN, Dept. ARN-14, ST. LOUIS, MO.**

MANUFACTURERS OF SOFT DRINK DISPENSERS OVER 45 YEARS



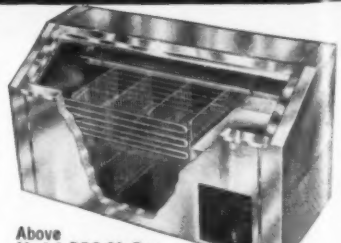
Model 14 Under Bar Dispenser Draws one sweet drink and saltier

## AMERICA'S FINEST BEVERAGE COOLERS



Above Model B180, Stainless Steel Exterior, with #2820 Double-Spout Water Equipment. "B" Models... Wet or Dry Operated Coolers. 4 Sizes—4, 5, 6 & 6½ Ft.

**"Beveco Maid"**  
Four sizes in each model... capacity range from 5 to 50 cases, here is the answer for fast, low-cost, trouble-free cooling... Write for literature and complete details.



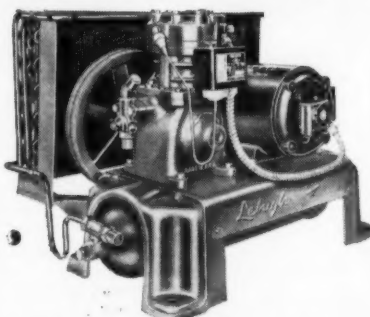
Above Model DB6-21 Dry Cooler, S.S. Exterior, with Fin-Coil Construction. No Blower Necessary. "DB" Models... Dry Counter-Type. 4 Sizes—4, 6, 8 & 10 Ft. Self-Contained or Remote Units.

**The BEVCO Company, Inc.**  
3110 N. 11th Street • St. Louis 7, Mo.

**CHOICE OF THE TRADE IS THE "BEVCO-MAID"**

## 1950 BUSINESS BOOSTERS—by the LEHIGH TEAM

### A COMPLETE LINE OF CONDENSING UNITS from ¼ H.P. to 5 H.P.



½ H.P. Heavy Duty Air Cooled Unit

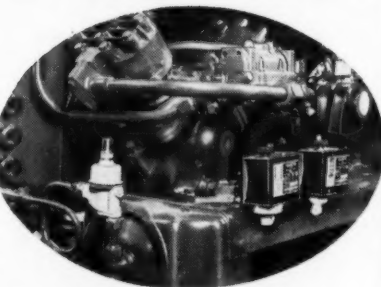
- ★ Package Air Cooled—1/4, 1/3, 1/2 H.P.
- ★ Standard Air Cooled—1/2 H.P.
- ★ Heavy Duty Air Cooled—1/3, 1/2, 3/4, 1, 1½, 2, 3 H.P.
- ★ Water Cooled—1/2, 3/4, 1, 1½, 2, 3, 5 H.P.
- ★ Combination Air and Water Cooled—1/2, 3/4, 1, 1½, 2, 3 H.P.
- ★ Truck Units—3/4, 1, 1½, 2 H.P.
- ★ Automatic High Side Defrost Units
- ★ Units for Evaporative Condensers
- ★ Water Cooled Condensers
- ★ Gasoline Engine Driven Units
- ★ Units for Specific Uses
- ★ Bare Compressors

Write For New Catalog and Price List

### ... the biggest news in 50 Years of COMMERCIAL REFRIGERATION!

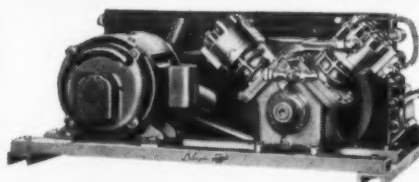
#### Lehigh's New AUTOMATIC HIGH SIDE DEFROST CONDENSING UNIT

—for evaporator temperatures below 32°F. A sensational engineering development by the LEHIGH TEAM. Can be used on any evaporator. Compact—simple—fool-proof—LOW COST! Photo shows Lehigh automatic defrost controls on a 3/4 H.P. Heavy Duty air cooled unit.



Don't Fail to Write For Bulletin DF-1038A or See Your LEHIGH Jobber

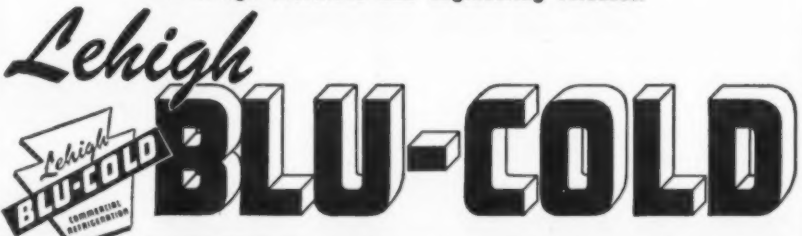
### LEHIGH Engineering Is Improving TRUCK REFRIGERATION EFFICIENCY



Lehigh's sturdy, space-saving truck units are doing an outstanding job for many of America's largest carriers. If your problem is truck refrigeration the LEHIGH TEAM can place a wealth of valuable data at your disposal. The 1 H.P. Unit illustrated is only 13" high.

Available also as an Automatic High Side Defrost Unit

DEALERS, MANUFACTURERS, SERVICE MEN—place your name on our mailing list to receive all Lehigh literature and engineering releases.



**Lehigh BLU-COLD**

**Lehigh Manufacturing Co.**

Plant: LANCASTER, PENNA.

Export Department — 39 Broadway, New York 6, N. Y.



## Frozen Food Convention Set To Open--

(Concluded from Page 1, Column 3)  
will cover such subjects as cost reduction programs, labor, new legislation, improved warehousing methods and services, research, farm price supports, employee relations, insurance and welfare programs, collective bargaining procedures, etc.

Of special interest will be the Wednesday morning session when prominent warehouse customers are expected to tell refrigerated warehouse operators frankly what they'd do "If I Were a Warehouseman. . ."

The warehousemen's convention will provide three full days of meetings around the central theme of "Get Fit for the Fifties." On Tuesday night there'll also be the regular AWA Family Party, and on Wednesday evening the President's Reception preceding the annual banquet.

Meanwhile, the Frozen Food Industry convention going on at the Congress will feature several panel round-table discussions sponsored by the National Wholesale Frozen Food Distributors, Inc. plus two symposiums to be staged by the packers.

"Research and Standards—Present and Future" is the topic of one of the symposiums scheduled for Wednesday morning, while "Production Techniques" will be discussed Thursday morning.

The four talks to be presented at the "Research" symposium are:

"The Role of Research in Introducing a New Product," by Dr. J. L. Heid, director of research, Florida Citrus Canners Cooperative.

"Industry's Place in Preparing Food Standards," by A. W. Dutcher, administrative assistant, research and standards, National Association of Frozen Food Packers.

"Current Activities of the Food & Drug Administration," by John H. MacVey, counsel, NAFFP.

"University Research and the Frozen Food Industry," by Dr. H. C. Diehl, director, Refrigeration Research Foundation.

Presiding at this symposium will be L. S. Martin, secretary-manager of the packers association.

Four topics will likewise be discussed at the symposium on "Production Techniques." These include: "Integration of Field and Raw Product Schedules with Successful Production."

"Production and Material Control," "Mechanics of Handling Materials in Production and Storage."

"Line and Equipment Design."

In their round table discussions the distributors will take up such problems as "Plant Facilities," "Distribution Through Chain Stores," "Institutional Distribution," and "Distribution Costs."

In addition, there will be meetings of the boards of directors of the two organizations, annual meetings of members, a cocktail party Tuesday evening, and an all-industry luncheon and buffet supper on Thursday.

Chicago frozen food distributors are also planning open house receptions at their plants on Friday.

Tentative program for the Frozen Food Convention follows:

### TUESDAY, JAN. 31

9 a.m.—Registration opens.

10 a.m.—Board of directors meeting, National Wholesale Frozen Food Distributors, Inc.

10 a.m.—Board of directors meeting, National Association of Frozen Food Packers.

2 p.m.—Panel round-table, "Distributors Plant Facilities," NWFFD.

2 p.m.—Legislative committee meeting, National Association of Frozen Food Packers.

2 p.m.—Warehousing and transportation committee meeting, National Association of Frozen Food Packers.

6 p.m.—All-Industry cocktail party, Casino room.

### WEDNESDAY, FEB. 1

8:30 a.m.—Brand breakfasts, NWFFD.

10 a.m.—Panel round-table, "Distribution Through Chain Stores," NWFFD.

10 a.m.—Panel round-table, "Institutional Distribution," NWFFD.

10 a.m.—Symposium, "Research and Standards—Present and Future," NAFFP.

1. Role of Research in Introducing a New Product.

2. Industry's Place in Preparing Food Standards.

3. Current F & DA Activities.

4. University Research and the Frozen Food Industry.

2 p.m.—Annual meeting, National Wholesale Frozen Food Distributors, Inc. (members only).

2 p.m.—Annual meeting, National Association of Frozen Food Packers (members only).

3 p.m.—Panel round-table, "Distribution Costs," NWFFD.

### THURSDAY, FEB. 2

10 a.m.—Symposium, "Production Techniques," NAFFP.

1. Integration of Field and Raw Product Schedules with Successful Production.

2. Production and Material Control.

3. Mechanics of Handling Materials in Production and Storage.

4. Line and Equipment Design.

12:30 p.m.—All-Industry luncheon and general session, Gold room.

7 p.m.—All-Industry buffet supper, Casino room.

### FRIDAY, FEB. 3

10 a.m.—Board of directors meeting, National Association of Frozen Food Packers.

2 p.m.—Board of directors meeting, National Wholesale Frozen Food Distributors, Inc.

4:30 p.m.—All-Industry committee meeting.

## Thor Appoints Wilson General Sales Manager

CHICAGO—The appointment of M. Robert Wilson, sales consultant, as general sales manager of Thor Corp., was announced recently by John R. Hurley, president of the appliance firm.

Simultaneously, Wilson announced his resignation as president of Mason-Wilson, Inc., sales consulting firm of Chicago and New York City. Among the firm's clients have been Cory Corp., Federal Enameling & Stamping Corp., Leetex Rubber Co., and Swing-A-Way Products Co.

In his new capacity, Wilson assumes active direction of all Thor sales policies. This was formerly one of the duties discharged by the president.

Before forming Mason-Wilson, Inc., with Kevil Mason in 1948, Wilson was sales manager of the special accounts division of Ekco Products Co., Chicago, manufacturer of housewares, where he developed the idea of built-in pressure cookers for electric ranges.

Previously he had been premium sales manager for the William A. Rogers Div. of Oneida, Ltd., Oneida, N. Y.; a partner of Premium Sales Co., Chicago; and assistant general sales manager of the Midway Chemical Div. of American Home Products Co.

## Repeal of Excise Tax Advocated by NAED

NEW YORK CITY—On behalf of its membership of nearly 1,000 distributors of electrical appliances and supplies, the National Association of Electrical Distributors advocates prompt repeal of the existing excise taxes on electrical products.

Charles G. Pyle, managing director of NAED, points out that such tax repeal would inevitably and quickly result in increased buying which in turn would produce more business and income taxes through normal channels.

All of the excise taxes, Pyle said, were established as wartime measures and served their purpose during the war, but are no longer the proper method of taxation.

The association joins with other business groups in urging that the Congress give early and careful study to the question of excise tax repeal which, if carried out, could do much to correct a condition that has definitely retarded business at a time when every effort is being made to increase sales, strengthen the national economy, and produce more jobs.

## Ralph F. Weppner of Buffalo Succumbs at His Home

BUFFALO—Ralph F. Weppner, 49, assistant sales manager of the General Electric Supply Corp., appliance distributor, died Jan. 11 at his home here.

Weppner was associated with the Robertson Cataract Electric Co. when it merged with General Electric Supply Corp. Surviving are his wife, a son, and a daughter.

## Bureau Alerts Vets--

(Concluded from Page 1, Column 4)  
their ability to see through fraud and deception, they could easily become victims of fast-working operators.

Better Business Bureaus are interested also in protecting the interests of the thousands of honest merchants and business firms using energy and imagination in advertising and selling their goods and services in the normal course of meeting competition in their daily business.

Victor H. Nyborg, president of the Association of Better Business Bureaus, Inc., asserted that it is natural that they should want to increase their sales and add to the number of their customers by appealing to veterans.

He added that these firms will co-operate with the Better Business Bureaus in alerting veterans and the general public should anyone try to use unethical or unfair devices and techniques to lure veterans into buying misrepresented or worthless goods and services.

## Nee Elected NRFA President

CHICAGO—Maurice Nee, of the P. J. Nee Co., Washington, D. C., was elected president of the National Retail Furniture Association at a board of directors meeting held here during the annual winter home furnishings market.

The 34-year-old Nee succeeds Julius Goodman, Union-Fern Co., Troy, N. Y.

At present Nee heads the retail advisory committee of the Department of Commerce, which represents 87 retail trades and their interests in the nation's business circles.

## November Refrigerator Sales, Off 13% from October, Reflect 11-Month Downward Trend

### Complete Refrigerators Only

(Lacquer and Porcelain Exterior Cabinets) (Advertised Sizes)

### NOVEMBER (13 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. Less than 4 cu. ft....	141	.....	50	191
2. 4 cu. ft. ....	1,048	.....	87	1,135
3. 5 cu. ft. ....	.....	.....	.....	.....
4. 6 cu. ft. ....	34,018	.....	2,584	36,602
5. 7 cu. ft. ....	64,401	.....	3,827	68,228
6. 8 cu. ft. ....	39,431	.....	1,302	40,733
7. 9 and 10 cu. ft. ....	75,218	.....	1,046	76,264
8. 11 and 12 cu. ft. ....	6,964	.....	141	7,105
9. 13 cu. ft. and up....	.....	.....	.....	.....
10. Total .....	221,221	.....	9,037	230,258

### FIRST ELEVEN MONTHS (13-12 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. Less than 4 cu. ft....	2,177	.....	52	2,229
2. 4 cu. ft. ....	23,439	.....	2,526	25,965
3. 5 cu. ft. ....	.....	.....	.....	.....
4. 6 cu. ft. ....	472,901	.....	35,728	508,629
5. 7 cu. ft. ....	829,320	28	31,304	860,652
6. 8 cu. ft. ....	1,074,265	4	40,071	1,114,340
7. 9 and 10 cu. ft. ....	894,433	2	21,177	915,612
8. 11 and 12 cu. ft. ....	148,541	.....	3,780	152,321
9. 13 cu. ft. and up....	35	.....	1	36
10. Total .....	3,445,111	34	134,639	3,579,784

Participating companies: Admiral Corp.; Avco Mfg. Corp.; The Coolera-tor Co.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint, Inc.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; Norge Div., Borg-Warner Corp.; Sanitary Refrigerator Co.; Seeger Refrigerator Co. (out 1-1-49, in 11-1-49); Westinghouse Electric Corp.; Stoddard Mfg. Co. (out 5-1-49).



**In Air Conditioning and Refrigeration . .**

**3 to 1 ADVERTISING LEADER**

**Many PRODUCTS**

**Many PROSPECTS**

**One DOMINANT PAPER**

**MORE PENETRATING COVERAGE OF IMPORTANT MARKETS**

For the thousands of products produced and sold by the refrigeration and air conditioning industry, there is only one publication that reaches the entire market—AIR CONDITIONING & REFRIGERATION NEWS.

For the many prospects to be reached in doing a complete selling job through advertising, advertisers are choosing the NEWS three-to-one over any industry publication.

Here is a great industry which is served by one weekly newspaper, the only one publication which gives penetrating contact for advertisers in every phase of manufacturing and distribution in the "big ticket" appliance field and

in the commercial refrigeration and air conditioning fields.

The NEWS is not only a dealer paper, not only an engineering journal, not only a new equipment digest—it is the "Newspaper of the Industry," edited for sales and management executives, design and production engineers, purchasing agents, wholesalers, contractors, sales outlets, and service and installation firms.

For almost a quarter century, the most experienced and largest editorial staff in the field has enabled the NEWS to report and interpret every phase of the industry completely and authoritatively.

And here are just some of the many products now being advertised in the NEWS:

Steel Stampings	Aluminum Bearings	Insulation Hardware	Home and Farm Freezers	Milk Coolers
Tubing	Castings	Paints and Finishes	Household Refrigerators	Soda Fountains
Fittings	Motors	Lubricants	Air Conditioning Units	Ice Cream Cabinets
Valves	Pulleys	V-Belts	Carbonators	Electric Ranges
Controls	Pumps	Unit Coolers	Filters	Evaporative Coolers
Shafts	Cooling Towers	Ice Cube Machines	Fans	Humidifiers
Seals	Metal Hose	Display Cases	Blowers	Handtrucks
Plastics	Vibration Eliminators	Registers and Grilles	Condensing Units	Heat Exchangers
Driers	Gaskets	Beverage Coolers	Evaporators	Cold Plates
Refrigerants	Mouldings	Water Coolers	Coils	Leak Detectors
			Shelving	Locker Equipment

This partial list of advertised products shows that more and more advertisers are finding that this is one industry where one advertising medium reaches all the important prospects.

Complete facts on AIR CONDITIONING AND REFRIGERATION NEWS are contained in two new booklets, "Inside Dope No. 10" and "Market and Media File." Here you'll find all the information that will prove the NEWS to be today's best buy in this "blue chip" industry. These booklets are yours for the asking.



AN INTERNATIONAL INSTITUTION

SUBSCRIBERS ALL OVER THE WORLD



**AIR CONDITIONING AND REFRIGERATION News**

BUSINESS NEWS PUBLISHING COMPANY

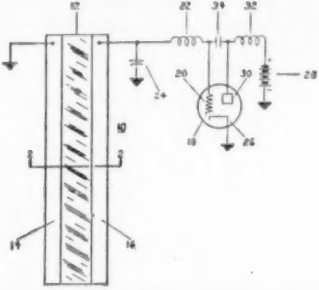
450 W. FORT ST., DETROIT 26, MICHIGAN



# PATENTS

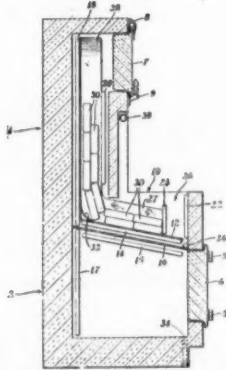
Week of September 13  
(Continued)

**2,481,728. HUMIDITY RESPONSIVE RESISTOR.** Alexis B. Dember, Towson, Md., assignor to Bendix Aviation Corp., South Bend, Ind., a corporation of Delaware. Application Oct. 24, 1945, Serial No. 624,245. 5 Claims. (Cl. 201-63.)



1. In a hygroscopic resistor assembly subject to variations in resistance resulting from the effects of polarization, the combination of, a relatively non-conductive base, film electrodes of conductive material deposited on said base having edges curving upwardly away from said base, and a film of electrolytically conductive material extending over said base and in contact with at least a portion of said edges, the said upwardly curving edges serving to present a relatively large area of interface contact between the said film electrodes and the said film of electrolytically conductive material, whereby the effects of polarization are minimized.

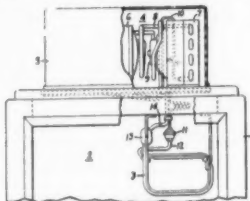
**2,481,790. DISPLAY AND DISPENSING REFRIGERATOR.** Philip Spiro, West New Brighton, N. Y. Application March 30, 1946, Serial No. 658,535. 6 Claims. (Cl. 68-89.5.)



1. In a refrigerated cabinet construction, the combination of, wall means defining a lower compartment and an upper

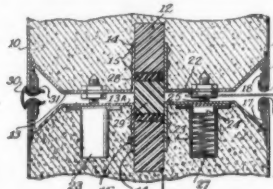
compartment with a refrigerated partition separating the two compartments, said upper compartment having a horizontal portion which is open-topped and which is adapted to hold the packaged food for display and having a vertical portion positioned along one edge of said horizontal portion which is closed except at its lower end where it is open into said horizontal portion, and refrigeration means to maintain said compartments in refrigerated condition whereby the air in both compartments is maintained cold and the lower end of said vertical portion is immersed in a cold blanket of air in said horizontal portion.

**2,481,968. REFRIGERANT FLOW CONTROLLING DEVICE.** Leonard W. Atchison, Schenectady, N. Y., assignor to General Electric Co., a corporation of New York. Application Aug. 10, 1946, Serial No. 689,707. 7 Claims. (Cl. 62-127.)



1. In a refrigerating system, an evaporator, a restricting tube for conducting refrigerant to the evaporator, means for preventing freezing of liquid within said restricting tube including a flow-controlling device between said tube and said evaporator, said flow-controlling device including a flexible diaphragm having an opening therein, and a movable closure member for said opening adapted to engage said diaphragm, said closure member being biased to maintain a pressure on the liquid in said restricting tube sufficient to prevent freezing therein.

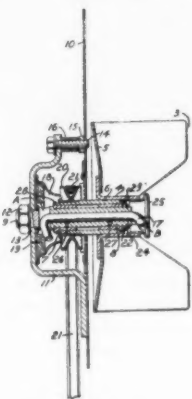
**2,481,972. MEANS FOR JOINING ELEMENTS OF SECTIONAL CABINETS.** Chester A. Betts, Portland, Ore. Application July 11, 1945, Serial No. 604,423. 4 Claims. (Cl. 189-36.)



1. A joint for refrigeration cabinet sections consisting of a longitudinal spacer strip, gaskets disposed along opposite edges of said strip, a breaker strip against each gasket, said breaker strips and spacer strip occupying the same plane, channels having their innermost legs secured to said breaker strips, and extending along said spacer strip, the outermost leg of each of said channels turning in the opposite direction than does said innermost leg, panels of metal forming the interior and exterior covering for the sections, each panel having an

turned edge adapted to engage the outermost leg of each of said channels, bolts passing through adjacent channels and nuts on said bolts engaging a pair of said channels and projecting into a space between adjacent panels so that said nuts are adapted to be turned through the space between adjacent edges of said channels and a molding occupying the space between the edges of said channels.

**2,481,980. AIR CIRCULATING BLOWER.** Arthur R. Constantine, South Bend, Ind., assignor to Bendix Home Appliances, Inc., South Bend, Ind., a corporation of Delaware. Application Oct. 18, 1947, Serial No. 780,709. 4 Claims. (Cl. 230-207.)



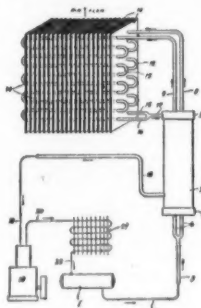
1. In a blower having a housing for directing air circulation of said blower, a support shaft supported outside said housing and extending into said housing, a tubular member carrying said rotatable member and extending over said shaft and having an end thereof sealed, a sharp edge oil slinging portion on said tubular member on the end thereof extending outside said housing, an oil reservoir surrounding said sharp edged portion, a wick extending through a hollow central portion of said shaft from said reservoir to contact said sealing member at a point away from the center of rotation of said tubular member whereby oil circulation from said reservoir through said wick to the outer end of said shaft adjacent said tubular member is induced on rotation of said tubular members and oil returning to said sharp edge oil slinging portion is returned to said reservoir on rotation of said tubular member.

## DESIGNS

**155,170. DESIGN FOR A WET AND DRY BULB THERMOMETER ASSEMBLY.** Anthony H. Lamb, Hillside, N. J., assignor to Weston Electrical Instrument Corp., Newark, N. J., a corporation of New Jersey. Application Dec. 8, 1947, Serial No. 143,039. Term of Patent 14 years. (Cl. D52-7.)

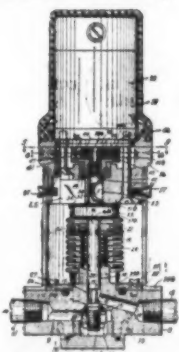
## Week of September 20

**2,482,171. FLOW CONTROL DEVICE FOR REFRIGERATION APPARATUS.** Ernest Gygay, St. Louis, Mo., assignor to General Engineering & Manufacturing Co., St. Louis, Mo., a corporation of Missouri. Application Oct. 4, 1945, Serial No. 620,311. 1 Claim. (Cl. 62-127.)



A refrigerant flow control attachment for refrigeration apparatus adapted to automatically control the flow of a refrigerant and a miscible oil mixture comprising a sealed casing, a plurality of capillary coils disposed in said casing having inlets at one end and outlets at the other end thereof, said inlets being adapted to be connected to a refrigerant receiver, said outlets being adapted to be connected to separate evaporator coils, an inlet in the casing adjacent said coil outlets adapted to be connected to an evaporator outlet, an outlet in the casing adjacent said coil inlets adapted to be connected to the suction side of a compressor, said refrigerant gas outlet being disposed above a bottom level of said casing to provide a liquid trap, and means for withdrawing any accumulated relationship obtains between a refrigerant and oil liquid mixture in said coils and refrigerant gas in said casing when said attachment is installed.

**2,482,199. MOTOR OPERATED VALVE.** Edward G. Miller and Ralph E. Engberg, Clayton, Mo., assignors to Alco Valve Co., St. Louis, Mo., a corporation of Missouri. Application Sept. 20, 1943, Serial No. 503,022. 1 Claim. (Cl. 137-139.)



In a valve mechanism, a reversible motor having a projecting shaft, valve elements including a valve housing, an inlet passageway, an axial bore having a valve seat, and an outlet passageway formed therein,

a poppet valve stem slidable in the axial bore, a valve head provided with sealing means formed adjacent a reduced portion of the valve stem, a chamber formed in said bore by the reduced portion of the stem, an expansible spring arrangement normally maintaining the valve head seated against the valve seat, a bellows assembly for hermetically sealing the aforesaid valve elements from the remainder of the mechanism, a cylindrical shell mounted on the valve housing in spaced relation to the bellows, a member provided with an axial bore and being mounted on and supported by said valve housing, a jack-screw axially slidable but non-rotatable in the bore, an enlarged head portion of the jack-screw being in contact with the upper end of the poppet stem, a rotatable nut engaging an externally threaded portion of the jack-screw for reciprocating the latter axially to seat or unseat the valve head, and a power transmission means including an epicyclic gear train interposed between

the motor shaft and the rotatable nut, whereby the latter is driven at a greatly reduced speed by said motor.

**2,482,202. FREEZING COMESTIBLES WITH COMPATIBLE SOLUTIONS.** Harry A. Noyes, Watertown, Mass. No Drawing. Application April 10, 1943, Serial No. 482,611. 7 Claims. (Cl. 99-193.)

1. The method of freezing fruits and vegetables, comprising directing a spray of a liquid refrigerant against bodies of such comestibles while supported in the atmosphere at a rate and in a volume such as to envelope such bodies and rapidly remove and renew the liquid in contact with the surfaces of the bodies, such refrigerant being an aqueous solution of matter compatible with the comestible having a freezing point of below 20° F. and a viscosity of less than 65 centipoises at the temperature of use, and applying it at a temperature within two degrees above its freezing point.

## CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

### POSITIONS WANTED

CAREFULLY SELECTED group of trained men, graduates of reliable and well established trade school now available to fill positions in the radio or refrigeration field. Willing to travel anywhere. Why not fill that vacancy with an efficient and reliable man? Write EASTERN TECHNICAL SCHOOL, 888 Purchase Street, New Bedford, Mass.

DO YOU have a help problem? Let us solve yours. Select from our graduates the man qualified to handle your work. We have men available for all parts of the country, who have completed 34 weeks of practical shop refrigeration and some who have also completed our practical advanced training course in air conditioning. Many are very well qualified. THE ST. LOUIS SCHOOL FOR ELECTRICITY AND REFRIGERATION, INC., 6767 Southwest Avenue, St. Louis 17, Missouri.

SERVICE AND installation man. Wants job with firm that can offer year around work. Has 12 years experience in commercial and domestic refrigeration and air conditioning; also oil burner experience. Has car and tools. Will go anywhere in U. S. if the job is year around. BOX 3389, Air Conditioning & Refrigeration News.

SERVICE MANAGER, 20 years experience heading household refrigerator and air conditioning service departments for top manufacturers, will be interested in new affiliation in the East early 1950. BOX 3394, Air Conditioning & Refrigeration News.

### POSITIONS AVAILABLE

SERVICE AND installation man. Must be thoroughly experienced refrigeration, air conditioning and automatic ice makers. York experience preferred but not essential. Permanent position for qualified man. Write fully of your experience. FIRST COLONY DISTRIBUTORS, INC., 310 S. Harrington Street, Raleigh, N. C.

SALES ENGINEER. Experienced commercial refrigeration sales engineer now making over \$5,000.00 yearly and wants to make more; capable selling refrigeration equipment, automatic ice makers, package and remote air conditioning. We are distributors for York and Hussmann in the rich central and eastern North Carolina territory. Write fully of your experience. FIRST COLONY DISTRIBUTORS, INC., 310 S. Harrington Street, Raleigh, N. C.

WANTED IMMEDIATELY, fully experienced foreman for sealed units overhauling plant abroad. All expenses paid. Only top men apply: B. KESTENBAUM, 330 7th Ave., New York, N. Y. LO. 3-2198.

COMMISSION SALESMEN and manufacturer's representatives wanted to handle well-known line of freezers and milk coolers. Several territories are now open for aggressive salesmen who are acquainted with and can sell dealers, jobbers and distributors in their territories.

Non-competitive lines can be handled simultaneously. Write stating experience and qualifications. EMIL STEINHOFF & SONS, INC., Utica, New York.

SALES MANAGER. Phila. manufacturer of prefab. sectional freeze coolers, nationally recognized, reorganizing sales dept. Proven sales and organizational ability, knowledge of distribution methods required. Following in industrial refrigeration trade essential. Duties include appointing distributors, factory agents, contacting national accounts. Real opportunity with firm of modest size; moderate starting salary plus liberal commission on gross sales. Must have car, willing to reside Phila. or commute. Give full details first letter. BOX 3393, Air Conditioning & Refrigeration News.

### EQUIPMENT FOR SALE

WHOLESALE SEALED unit exchange and rebuilding. We will rebuild and convert your unit to "Freon-12" One year guarantee. Write for price list and shipping instructions. ADVANCE REFRIGERATION COMPANY, 829 East McNichols Road, Detroit 3, Michigan.

COMPRESSOR, 60 ton evaporative cooled type. Used on air conditioning application but in good condition. Bargain: \$2,000.00 F.O.B. Cincinnati. BIMEI CO., Cincinnati, Ohio.

BUTCHER BEAM scale. New, 600 lbs. capacity. Special at \$19.50 while they last. GENERAL REFRIGERATOR & STORE FIXTURE CO., 856 N. Broad St., Philadelphia 30, Pa.

POPULAR NEW low temperature liners. Quick close-out. Will sell for 10% of original cost. All popular sizes. F.O.B. New York, crated, net price, deposit required. 21-27 x 21 x 19½, \$9.00 ea. 16-49 x 21 x 19½, \$11.00 ea. 18-36 x 21 x 19, \$10.00 ea. 11-40 x 21 x 24, \$10.00 ea. 27-45 x 21 x 21, \$12.00 ea. 28-57 x 21 x 21, \$14.00 ea. 18-81 x 21 x 21, \$18.00 ea. 4-121 x 10 x 12, \$15.00 ea. Immediate disposition necessary. Must vacate before February first. Phone Astoria 8-0603, or write or wire. TRI-BORO REFRIGERATION SERVICE, INC., 23-66 Steinway St., Long Island City 5, N. Y.

### SCHOOLS

DETROIT AIR Conditioning Institute is accepting applications for enrollment in spring term classes starting January 31, 1950. Fully GI approved courses in air conditioning, refrigeration, heating ventilating, sheet metal layout, heat pump engineering. Write for free information. DETROIT AIR CONDITIONING INSTITUTE, Dept. D, 4258 Woodward, Detroit, Michigan.

### MISCELLANEOUS

FRIGIDAIRE SEALED units, 1933 to 1937, remanufactured. Our exclusive method enables these machines to operate more efficiently than when new. Also rebuilding on all other sealed units. Write for price list. BRIGHT'S REFRIGERATION, INC., 14410 E. Jefferson, Detroit 15, Michigan.

NORGE SEALED units remanufactured and exchanged. Immediate delivery from stock, 1 year guarantee. Write for prices and shipping instructions. Complete Norge engineering service. 22 years experience. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 5, Michigan.

## FACTORY REPRESENTATIVES WANTED

by McQUAY, INC.

and

AMERICAN AUTOMATIC ICE MACHINE CO.

Several sales territories open in different parts of the country for men with experience in the refrigeration industry.

Liberal rates of commission with drawing account if required.

Applicants are requested to give full particulars of past experience and personal information. Also send photograph. All applications will be treated confidentially.

Positions involve sale of "low side" commercial products to the wholesale trade and manufacturers, in addition to the sale of automatic ice machines to dealers.

Apply in writing to general sales manager.

**McQuay Inc.**

1600 BROADWAY N. E., MINNEAPOLIS 13, MINN.

## Subscribe Now

Receive the greatest trade paper in the Industry—AIR CONDITIONING & REFRIGERATION NEWS. Published every week. Brings you latest news and vital information on household refrigeration, commercial refrigeration, air conditioning, home freezers; manufacturing, distributing, retailing, servicing, and contracting. Only \$5 per year, 52 issues.

Fill in coupon and mail today

AIR CONDITIONING & REFRIGERATION NEWS  
450 West Fort Street, Detroit 26, Michigan

Gentlemen: Send the NEWS for one year.

☐ \$5 enclosed ☐ Bill me ☐ Bill the company

Name.....

Company.....

Street.....

City..... Zone..... State.....



# Refrigeration Problems

## and their Solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

### Cause of Burned Out Compressor Bearings

A couple of months ago we received a letter from a reader in Amsterdam, Holland, asking for an opinion on what was causing excessive bearing wear of two 5 hp. and two 3-hp. "Freon-12" condensing units on a fish freezing installation. Suction pressure at cut-out was 2 in. of vacuum and at cut-in, 10 p.s.i.g. which probably resulted in an average evaporator temperature of about -18° F. Cooling water temperature was about 54° F. and a rise of approximately 10° F. was permitted. The head pressure at these in-and-out temperatures would depend somewhat on condenser design, but the average head pressure was probably about 70 p.s.i.g. At any rate, it must have been quite low.

The reader mentioned that a heat exchanger was used and that the suction line from the heat exchanger to the compressor was dry, so it was above the dewpoint temperature of the room, and it is likely that the suction gas was superheated to nearly room temperature by the time it entered the compressor. It would be reasonable to assume that the temperature of the "Freon-12" entering the compressor was about 65° F.

#### COMPRESSOR BEARINGS 'SHOT' AFTER TWO MONTHS

After only two months of use, the main and connecting rod bearings were completely ruined, or as the reader described them, "melted away." The compressor oil level had been up to normal at all times and no peculiarities of operation were observed.

Another reader had suggested that during the off-cycle the oil in the compressor absorbed so much refrigerant that its viscosity and lubricating ability were impaired and the bearings wore excessively. He sug-

gested a suction line solenoid valve, to be closed during the off-cycle, so as to prevent absorption of "Freon-12" by the compressor oil during the off-cycle.

Our first reader doubted this explanation and properly observed that since the suction line was dry during the running cycle, the suction gas entering the compressor must have been warm, thus reducing the likelihood of wet refrigerant entering the compressor and thus thinning the oil.

We wrote him and offered an explanation along the following lines and suggested some corrective procedures.

This is not an uncommon condition on low-temperature installations, but frequently its cause is not recognized. We felt that perhaps other readers might be interested in our diagnosis of what may have caused the too-rapid wearing of the bearings.

A more detailed description of the installation and its operating characteristics, including temperatures at several other locations on the equipment, might indicate causes of the too-rapid bearing wear other than those that we suggested, but there are two clues that inclined us to suspect that the compressor crankcase ran too hot, thus resulting in reduced oil viscosity and lubricating value, and consequently in excessive bearing wear.

#### TWO CLUES

One clue was the low evaporator temperature and the other was the warm suction line. If the suction gas is allowed to warm up to about room temperature, then its superheat or temperature rise is going to be very much greater than if the evaporator temperature is high, say up at about 25° F. or 50° F.

That is, at the same compressor inlet temperature, the superheating of the suction gas is much greater on low-temperature jobs such as this one, than on high-temperature jobs in, for example, an air conditioning installation.

To illustrate, let us compare this job to an air conditioning installation having a 40° F. evaporator, and assume that the compressor inlet temperature is the same, say 65° F. Also, we will assume that the same compressor is used but that it operates at a higher revolutions per minute on the low-temperature installation than on the air conditioning in order that the motor load is about the same in both cases.

The reader referred to a 5-hp. unit, so we will assume a displacement of 35 c.f.m. on the -18° F. evaporator and 17½ c.f.m. on the 40° F. evaporator.

#### SUCTION GAS CONDITIONS FROM A -18° F. EVAPORATOR

If we refer to the "Freon-12" tables, we will find that at saturation at -18° F. and a suction pressure of 1.3 p.s.i.g., "Freon-12" has a volume of 2.37 cu. ft. per lb. and a total heat of 76.11 B.t.u. per lb. At 65° F. (superheated 83° F.) its volume is 2.856 cu. ft. per lb. and its heat content 87.72 B.t.u. per lb. Its suction pressure is still 1.3 p.s.i.g. So in warming up 83° to 65° F., it has increased about one fifth in volume and picked up 11.61 B.t.u. in heat.

Since its displacement on the low-

temperature job is 35 c.f.m., this compressor will be pumping (35 ÷ 2.856) or 12¼ lbs. of "Freon-12" per minute. This much "Freon-12" will bring (12¼ x 87.72) or 974.57 B.t.u. of heat to the compressor, of which (12¼ x 11.61) or 142.22 B.t.u. is superheat and (12¼ x 76.11) or 932.35 B.t.u. is latent heat.

#### SUCTION PRESSURE CONDITIONS FROM 40° EVAPORATOR

Now, to this let us compare what this same compressor at one half the revolutions per minute, so as to still give approximately the same load to a 5-hp. motor, will show on a 40° F. evaporator, again assuming that the gas gets to the compressor at 65° F. So in this case, it is superheated only (65° - 40°) or 25° instead of the 83° as before.

At 40° F. saturation the volume of "Freon-12" is .792 cu. ft. per lb.; or roughly one third what it was at -18° F. By the time it warms up the 25° to 65° F., its volume has risen to .841 cu. ft./lb. This is roughly 30% of the volume of the gas entering the compressor at 65° F. but coming from the -18° F. evaporator. Putting it another way, the gas from the 40° F. evaporator is over three times as dense, so if the compressor displacement were the same, it would pump over three times as much "Freon-12" as if it came from the -18° F. evaporator.

This would require about a 10-hp. motor, so the compressor revolutions per minute is cut to about one half, which cuts the displacement to 17½ c.f.m. in order that a 5-hp. motor can handle it.

At 17½ c.f.m. the compressor would pump (17.5 ÷ .841) or 20.8 lbs. of "Freon-12" per minute instead of the 12¼ lbs. from the -18° F. evaporator. Now, how about the amount of heat in this 20.8 lbs. as compared to the heat that was in the 12¼ lbs.?

At 40° F. saturation, the total heat content of "Freon-12" is 82.7 B.t.u./lb. Superheated to 65°, the heat content rises to 86.4 B.t.u./lb., a rise (superheat) of 3.7 B.t.u./lb. The compressor is pumping 20.8 lbs. of "Freon-12" per minute from the 40° F. evaporator (instead of 12¼ lbs. from the -18° F. evaporator), so it is pumping (20.8 x 86.4) or 1,797 B.t.u.—almost twice as much as from the -18° F. evaporator.

#### LITTLE SUPERHEAT FROM THE 40° EVAPORATOR

But (and here is the point of the whole thing) only 20.8 x 3.7 (or 78 B.t.u.) of this is superheat, as compared with the 142 B.t.u. of superheat from the -18° F. evaporator. That is, there is almost twice as much sensible heat in the 65° F. gas from the -18° F. evaporator as from the 65° F. gas from the 40° F. evaporator, although there is only about one half as much latent heat.

#### HOT OIL DOES NOT COOL HOT BEARINGS

So if the compressor is getting all of this sensible heat, it is bound to be affected by it. The body, the crankcase, and the oil will be heated far more by the large amount of sensible heat in the suction gas from the -18° F. evaporator than one half that much sensible heat from the 40° F. evaporator.

As a consequence, the oil was overheated, it became thinner, and lost a great deal of its lubricating value, so the bearings wore far more rapidly.

One of the prime functions of oil is to carry away heat. If the oil itself is very hot, it will not be able to carry away much heat from the bearings; that is, hot oil cannot cool hot bearings very much.

As a result, the bearings wore out in a fraction of their normal life. The reader did not mention it, but it is probable that the seal gave trouble too, due to excessive wear of the seal faces.

How hot can the oil get and still do a good lubricating job? That depends somewhat on the oil itself. A low viscosity oil—say 150 seconds Saybolt—thins out more with heat than does a 300 viscosity oil, so it would be better to use it in a hot compressor.

It is generally considered good practice to keep crankcase temperatures 120° F. or under. Crankcase temperatures above that are apt to result in excessive bearing and seal wear. Crankcase temperature can be determined by putting a thermometer to the crankcase, preferably near one of the main bearings or the seal.

#### HIGH DISCHARGE TEMPERATURE, TOO

Moreover, if we assume the same head pressure (and this is probably true, for this is a water-cooled machine and the condensing water is cool, so the water valve can be, and was set for a low head pressure, probably about 70 p.s.i.g.). Then the ratio of compression in the case of the -18° F. evaporator is 85 ÷ 16 (or 5.3), and 85 ÷ 52 (or 1.6) in the case of the 40° F. evaporator.

So with the gas compressed over three times as much (5.3 ÷ 1.6 = 3.3), the discharge gas is much hotter from the -18° F. evaporator than from the 40° F. evaporator, even though the head pressure is the same.

If we refer to a Mollier chart for "Freon-12," we find that at a 65° F. inlet temperature and a 70 p.s.i.g. head pressure, the discharge gas from the -18° F. evaporator will be at about 180° F., while from the 40° F. evaporator, it will only be about 100° F. So the hot gas discharge will even further aggravate the tendency of the crankcase to overheat on the low suction pressure.

#### REMEDY—REDUCE SUCTION SUPERHEAT

Yes, but what can the reader do about it? He can't do much about the hot gas discharge; he is already running about as low a head as is practical; and indeed it is an unusually low head pressure. If the compressor is not already so supplied it can be equipped with a water-cooled head.

The most important thing to do is to reduce the superheating in the suction line. Feed the expansion valve more heavily (lower superheat adjustment) so that the suction gas entering the compressor is about 0° F. instead of 65° F. This will still allow about 18° F. superheat, which is enough to prevent oil slugging if the expansion valve works smoothly and shuts off tightly during the off-cycle.

This cold a suction line will "sweat" and drip water, for it is far

below the dewpoint temperature of the room air, so it may be necessary to insulate the suction line to prevent drippage from the suction line.

With the suction gas temperature entering the compressor, lowered to 0° F. (18° F. superheat) the total heat of the gas is 78.56 B.t.u./lb. instead of the 87.72 B.t.u./lb. at a 65° F. inlet temperature. This reduces the superheat from 11.61 B.t.u./lb. to 2.45 B.t.u./lb., or less than one fourth as much. This will allow the crankcase to run cool enough that the bearings will stand up for a normal length of time, instead of lasting only a couple of months.

#### ANOTHER REMEDY—COOL THE OIL

On installations on which it is necessary to run high suction line superheat, and high compression ratios—that is, low-temperature installations using single stage compression, oil coolers have been used.

The crankcase oil can be cooled either by air or water. In the air-cooled method, an external oil line is run from the compressor oil pump to a small finned coil, preferably placed where there is some air movement. From this coil the oil is carried back to the crankcase. If the size of the oil cooled coil is generous, the oil can be cooled to within 20° F. above room temperature.

Perhaps a simpler and more effective way is to submerge a few inches of copper tubing in the oil in the crankcase so that it is not in the way of the rods and crankshaft, and pass cool water through this coil. On some makes of compressors this is furnished as standard equipment.

If the compressor oil is held to 100° F. or less, there should be no trouble from excessive bearing wear due to too much superheat of the suction gas on low-temperature installations.

#### William Smith Becomes A. & S. Buyer of Major Appliances

NEW YORK CITY—Abraham & Straus has announced the appointment of William Smith, formerly buyer of cameras, sporting goods, and summer furniture, as buyer of major appliances.

Smith, who has been associated with the store for 15 years, succeeds Harold Bassoff, who resigned to join King Refrigerator Co.

"The **THRIFTY** buy in '50"

**CHILL CHEST**

OFFERS . . .

**LARGER CAPACITY** IN LESS SPACE

**LOWER PRICE** PER CUBIC FOOT

8, 15 and 23 Cubic Foot CHILL CHESTS give big food capacity, yet no larger outside than most 6, 12 and 20 cubic foot freezers. Priced to compete with these smaller sizes, you have a distinct selling advantage. Lower Price per cubic foot! Get full details Now!

WIRE, PHONE OR WRITE

**Revco INC.**

DEERFIELD, MICH.

## KRAMER Evaporative Condensers

FOR TROUBLE FREE SERVICE

2 TO 8 TON CAPACITY  
WRITE FOR CATALOG R-162-B

KRAMER TRENTON CO. Trenton 5, N. J.

\* **GREATER PRIME SURFACE AREA FOR A FASTER PULL DOWN**

#### \*A KOLD-HOLD DEVELOPMENT

You get dependable refrigeration at lower cost when you use refrigeration plates with "Serpentine" design. These lightweight plates cool large areas quickly yet take up less room than conventional designs. They have no internal tubing or piping so their weight per square foot is extremely low, and installation is simplified.

One outer surface of the plate is flat and the other is embossed to form the channels through which the coolant flows. This provides direct refrigerant contact and the equivalent of 100% prime surface. The size of the refrigerant pas-

sage and the smooth contour of the return bend reduces pressure drop to the absolute minimum. Plates can't possibly become clogged or oil logged.

The flat, top surface of Serpentine Plates adapts itself readily to the construction of shelves and stands and banks to add extra convenience to holding and freezing rooms. Once installed, they provide a lifetime of efficient, dependable refrigeration performance. For proof . . . just ask anyone who uses one of the half million Kold-Hold Serpentine Plates in use today.

See your local refrigeration supplier or write us for details



## KOLD-HOLD

protects every step of the way

KOLD-HOLD MANUFACTURING CO., 500 E. Hazel St., Lansing 4, Mich.



## Continuing Sellers' Market Predicted--

(Concluded from Page 1, Column 5) was always reasonable pre-war."

But, Nance said, "I, for one, do not look forward to such a situation pleurably. Competition is the very lifeblood of our American economic system, and we learned from our postwar boom era that a sellers' market is fraught with danger."

"It promotes price inflation and inefficiency in production and distribution. Worst of all, it instills a false sense of security in workers and businessmen alike."

"Our biggest job during the current shortage period will be to guard against complacency. The wise dealer won't allow himself even a moment of fancied security."

"He will never forget that every sellers' market must end, and that a dealers' readjustment is still overdue from the prolonged postwar sellers' market. He will go on building the sales power of his organization by sales training, by giving good service and by building prospect lists and by every other method of good salesmanship."

"The unwise dealer will think he is in for another easy ride and forget everything that happened from April to September last year."

After presenting facts on the market penetration of various appliances to emphasize that "we all have a big selling job to do," Nance commented further on the situation arising out of the steel strike and the temporary sellers' market it has created.

"Last April, when the customers suddenly started to back away and the bottom fell out of the market, appliance manufacturers were able to help give buying a big push by reducing prices," he stated. "Don't expect that to happen if buying slumps and inventories pile up."

"Manufacturers were able to make adjustments last April and May because the slump brought with it some cost savings, principally by ending the necessity for paying gray market prices for some raw materials. That condition is not going to repeat itself."

"Everything in the general economic situation today is tending to push costs up, not down. Whether workers receive more directly in the weekly pay envelope or indirectly in the form of company-paid insurance and pensions makes no difference. Either way it is an addition to the cost of manufacture."

Blees, too, said that shortages of appliances are going to last a few more months and that the outlook for 1950 is good. Looking beyond this year, he saw continued favorable prospects, generally speaking.

"We won't ever see a major depression in this country until we have another war," he asserted. However, he added, "we will see adjustments and industries getting into trouble."

He said there is a "psychology of spending" in this country that will continue and multiply.

"People want all we can make and they will spend their money for these goods," he declared. "Who will have the products they want is the question."

Nothing that will happen in the '50's will resemble what happened in the '30's, Blees observed, because of our continuing rate of growth, which means an "ever-expanding market," and our increasingly higher standard of living. But, he cautioned, "we must plan soundly, keep our house in order . . . and marshal our forces to meet competition from other industries."

Pointing out that there are now 88,000 appliance dealers, Blees asserted that "we don't need that many and we shouldn't have that many."

He said dealers must be taught to be good business managers and to provide their suppliers with monthly financial statements and reports on sales and inventories. This is not being done, he stated, emphasizing that it is the only way to get the discount structure straightened out.

(Earlier, he had repeated a previously-expressed belief that discounts are too low. He said he still stood on that statement.)

Dealers who do not furnish monthly operating statements have no ground to stand on in claiming that discounts are inadequate, he said. He assured the retailers that the factory has no intention of using these figures to "slip up on your blind side," as some seem to think.

Some of the other points made by Blees were that price protection plans in effect today are "entirely unfair" to the manufacturer, that dealers and distributors should carry a 30-day inventory, and that many dealers are carrying too many lines.

Regarding price protection, he said dealers shouldn't ask for such protection and then refuse to give the manufacturer information on their businesses. On multiplicity of lines, he stated that no dealer is smart enough or has capital enough to handle four or five lines. Not more than two lines should be carried, he advised.

Two speakers predicted that retail excise taxes will be reduced or eliminated. J. T. Meek, executive secretary of the Illinois Federation of Retail Associations, said such levies probably wouldn't be changed until July.

However, "manufacturers' excise taxes, which plague the appliance dealer, will probably remain on the books because they are hidden and the consumer can't readily find something to squawk about," he told the meeting.

Noah M. Mason, congressman from Illinois, said that some kind of excise tax repeal and some kind of tax

equality program would be enacted at this session of Congress.

Other speakers included Walter Daily, sales manager of The Lewyt Corp.; George F. Taubeneck, editor and publisher of AIR CONDITIONING & REFRIGERATION NEWS; E. Carl Sorby, vice president of George D. Roper Corp.; C. A. D'Elia, president of D'Elia Electric Co.; and James Gheen, "philosophical humorist."

Both Daily and Taubeneck emphasized the importance of sales training programs. Most of the former's talk was devoted to outlining dealer sales promotion and advertising ideas.

Sorby presented 1950 sales promotion plans of the gas appliance industry. Among other things, he said that 1950 gas appliances sales are expected to far exceed those of 1949 and to more than double the pre-war average in some cases under expanded sales forces and promotional programs.

D'Elia told of the ambitious plans for the proposed National Electric Housewares Week which is scheduled to be held April 14-22.

The meeting saw James Lee Pryor, Wilmington, Del., re-elected as president. Phil S. Urner, Bakersfield, Calif., was elected vice president, and M. E. Brunderman, Chicago, and K. J. Stucky, Ft. Wayne, Ind., were re-elected secretary and treasurer, respectively.

Also, four directors were elected to serve for three years. They are Mort Farr, Upper Darby, Pa. (re-elected); Brunderman (re-elected); Wallace Johnson, Memphis, Tenn.; and Francis L. Monette, Lowell, Mass.

Six resolutions were approved by the NARDA membership. Most important were these:

1. That NARDA solicit the cooperation of manufacturers in fair

trading their products in all states where fair trade pricing is now legal, and continue to carry on an educational program on the operation and benefits of fair trade pricing.

2. That the association is in favor of the repeal of wartime excise taxes on appliance and radio-television products, and that the tax revenue which is thereby lost shall be made up by taxing the untaxed, including co-ops and institutions engaged in business for profit.

In the president's report, submitted at the first breakfast session, Pryor reviewed accomplishments of NARDA, which he said "came of age" during 1949, although it is not yet five years old.

He cited manufacturer-dealer consultations, 10 distribution point conferences in various metropolitan areas, publication of the NARDA Trade-In Guide, the cost-of-doing-business study, the weekly publication, the inventory-facts survey, and the association's fair trade program.

Except for the opening session, the two luncheons, and the annual banquet, the meeting was devoted to eight panel discussions. They covered hiring, training, and compensating salesmen; what the dealer can do about reducing his costs of doing business; sales promotion ideas that click; operating a service department at a profit; distributor problems; fair trade pricing; successful handling of trade-ins; and selling TV-radio profitably.

These discussions and some of the opening-session talks will be reported in detail in succeeding issues of the NEWS.

A press conference, attended by the board of directors, was held following the meeting. At that time, it was announced that:

## Named by Temprite



J. J. Goodwin (left) is Temprite's new general sales manager and William Pollock the new national service manager. (For full story see page 1.)

## Imperial Brass President Succumbs at Age of 70

CHICAGO—Frank McNellis, president since 1914 of the Imperial Brass Mfg. Co. here, died Jan. 16 at the age of 70.

With his father, Charles, he founded the firm in 1905 and developed it into a leading manufacturer of tube fittings and working tools. He became president upon his father's death.

1. NARDA will seek representation on the National Electrical Code committee and will ask to be recognized as one of the sponsors of the Adequate Wiring Bureau.

2. NARDA will offer to act as a collection agency for dealer inventory and sales figures, which would be supplied to manufacturers in an effort to help control production.

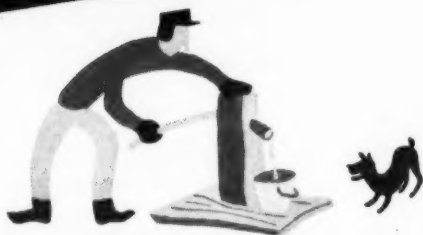
## Is The Last 10% Worth While?

Many times a concern would be far better off without the last 10% of its volume. Too often that last 10%—gained by strenuous sales effort—is penalty business and jeopardizes the rest of the profitable business. Why injure 90% for the sake of 10%? Our own business-building program takes these factors into careful consideration.

Seventeen years ago this advertisement appeared in the News. Today Universal Cooler believes in the same high principles and operates on the same ethical policy.

**UNIVERSAL COOLER**  
DIVISION, NEWPORT STEEL CORPORATION  
Marion, Ohio

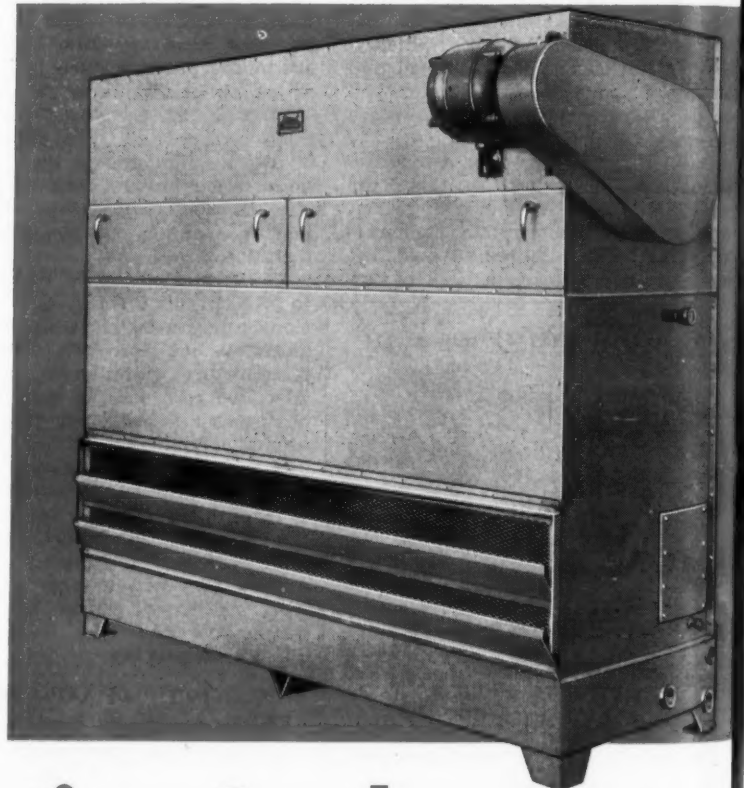
## CONSERVE WATER



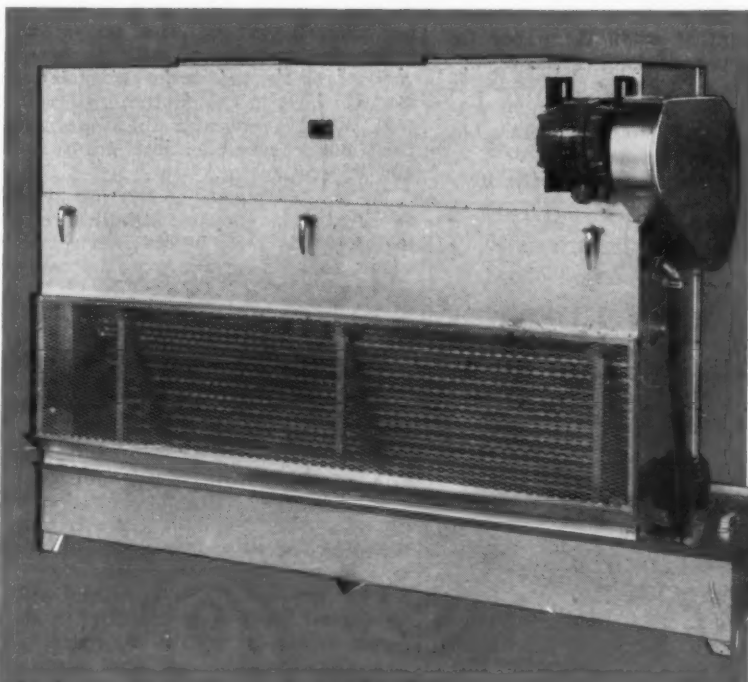
The tremendous publicity given the drought in New York City has focused public attention on water-consuming devices . . . has made doubly important the use of equipment which conserves our most important public resource.

For localities where water is scarce or costly . . . or water temperatures high . . . the logical solution is the Bush Cooling Tower which reuses water by cooling it after it leaves the condenser. The Bush Cooling Tower, in 3 to 75 ton capacities, is of the induced draft type . . . can be located anywhere in a building . . . and is equipped with centrifugal fans to handle an ample air volume through duct work for either intake or discharge.

## BUSH Cooling Towers



## BUSH Evaporative Condensers



Soundly engineered and ruggedly constructed in 5 to 75 ton capacities with welded steel frame hot-dipped galvanized after fabrication. For easy installation all units are designed to minimum depth . . . or built in sections to facilitate moving through standard width doors. All inside surfaces and frame completely covered with bitumastic compound for additional protection against corrosion.

SEND FOR NEW 1950 CATALOG. Illustrates and describes the complete BUSH LINE . . . with new engineering data to help you plan and specify.

Buy the Best—and the Best is Bush



BUSH MANUFACTURING CO. • WEST HARTFORD 10, CONN.